ARCHITECTVRAL RECORD



JANVARY 1924

Riddle

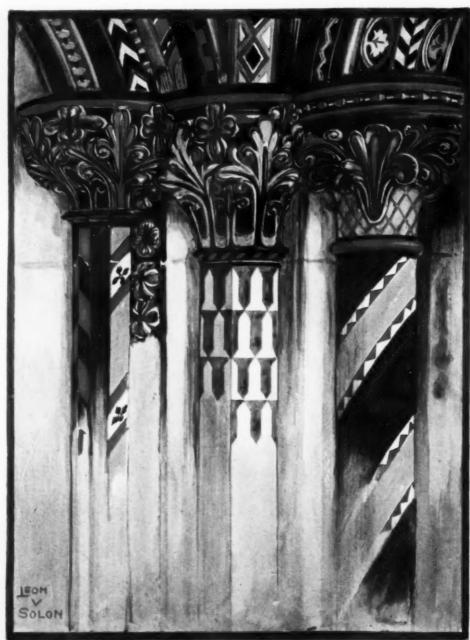
MANY architects have found the Riddle Planning Service helpful in designing appropriate lighting installations for homes and apartments. Details of this service, with illustrations of new Riddle designs in the Esperanto decoration will be sent on request.

THE EDWARD N. RIDDLE COMPANY TOLEDO, OHIO



A few of many Los Angeles homes of the bungalow type equipped with Riddle Fitments





The Architectural Record.

POLYCHROME STUDY

The Gothic Principles Applied to Detail from the Porch of Bridlington Church

The

ARCHITECTVRAL RECORD

VOLUME 55

JANUARY, 1924

NUMBER 1

COUNTRY PLACE TYPES OF THE MIDDLE WEST ~



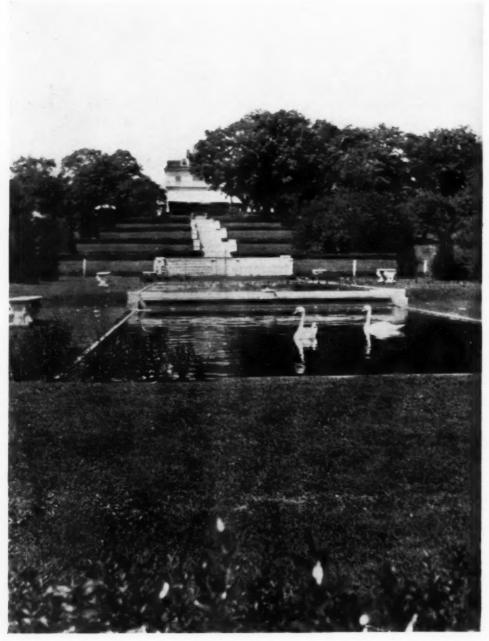
RALPH RODNEY ROOT Full Page Drawings by Robert B. Harris

H. Hudson Holly in his book, "Modern Dwellings in Town and Country," published at New York in 1878, suggests as a method of landscape design the following: "It is, of course, unnecessary, at this late day, to dilate upon the absurdity of geometrical arrangement in this department. That curves are a necessity, both for amplifying and beautifying our grounds, has long since been admitted; but to produce a curve which the wheels of a carriage would naturally trace is something which but one person in a hundred is capable of achieving. Downing, in speaking of planting trees in a natural manner, says that once, on account of a pressing engagement, he had not the time to stake out the location of every tree; so he threw, at random, a peck of potatoes, one by one, and directed the gardener to plant a tree where each potato fell. If this had not the

effect of grouping them scientifically, it certainly gave the appearance of natural arrangement. A rule similar to this, though crude of its kind, may be given to produce a natural curve to the road. Drive your carriage, or even an ox cart, over the ground in the direction by which you wish to reach the house, and the tracks which the wheels make will almost invariably have an easy and natural appearance."

Here we have then perhaps the fundamental difference between country estate design of the East and the Middle West. While in the West we may lack "antique finish" to our work we can count ourselves fortunate in escaping the "potato throwing" and the "ox-cart" period of landscape design which accompanied the mansion type of architecture of post-Colonial days.

A further circumstance of the country

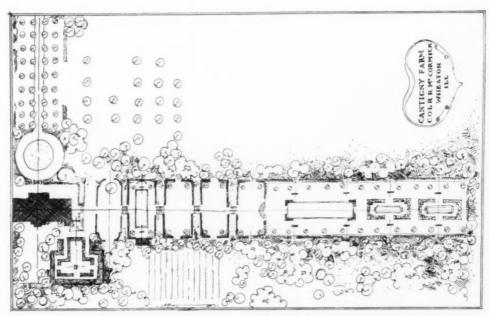


The Architectural Record

Garden axis of house carried out over a series of terraces with pools to open meadows and woods

COUNTRY PLACE OF COLONEL R. R. McCORMICK, WHEATON, ILLINOIS

Shepley, Rutan & Coolidge, Architects. Root & Hollister, Landscape Architects



PLAN OF ESTATE OF COLONEL R. R. McCORMICK, WHEATON, ILLINOIS
Root & Hollister, Landscape Architects

places of the Middle West is that almost without exception the sites for the houses have been selected because of some magnificent view of lake, river, valley or open prairie, and so located as to make the view the principal landscape feature in the general plan of arrangement. As a result, the dominant note that carries through the majority of our country place designs is an intimate relationship between the house area and the selected naturalistic view of lake or countryside. To this purpose, either because of space or topographical conditions, the gardens and more intensively cultivated spaces have been kept in close relation to the house group. We have thus escaped the scattered type of arrangement that finds precedent with country place designers of the East.

As one journeys through Illinois and observes the open prairie with the farm groups of buildings protected by the planted grove of trees that furnishes shelter from the sun and winds, a hint is given of the "country places" which have been developed adjacent to the

cities. While native tree groups have been utilized to direct the eye to some special view, the first objective of planted groves has been to give shade about the terraces and gardens and to produce park character along the entrance drive and throughout the house lawns. What is deprecated as our "meager" selection of plant material and our "peculiar" climatic conditions which handicap fine lawns, so far from militating against good design. have been a distinct aid in forming country places with pleasing composition of natural tree groups and broad sweeps of meadow and open fields. The spring and fall seasons produce an abundance of flowers in our prairies and wooded lands, and it is from this that the idea has been taken for the planting of many of our gardens. We plan to have a real show of flowers during the two seasons and then depend upon the architectural features and the strong masses of shrub and perennial foliage to carry the garden through the few hot summer weeks that intervene.

Our planting thus determined for us



View of house from approach drive



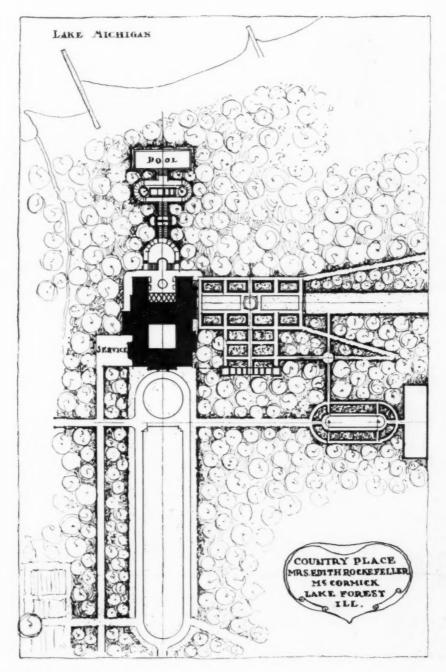
The Architectural Record

January, 1924

View of house from lake

RESIDENCE OF MRS. EDITH ROCKEFELLER McCORMICK, LAKE FOREST, ILLINOIS

Charles Platt, Architect and Landscape Architect. Phelps Wyman, Collaborating



The Architectural Record

January, 1924

Plan of Estate

RESIDENCE OF MRS. EDITH ROCKEFELLER McCORMICK, LAKE FOREST, ILLINOIS
Charles Platt, Architect and Landscape Architect. Phelps Wyman, Collaborating



Main vista with tea house in the distance



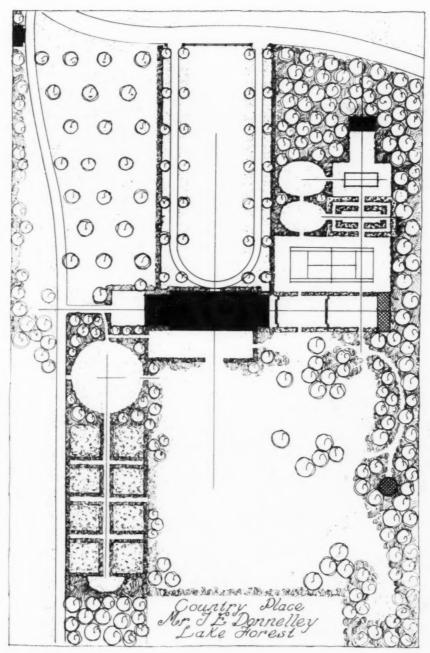
The Architectural Record

January, 1924

Formal garden on cross axis

RESIDENCE OF MRS. EDITH ROCKEFELLER McCORMICK, LAKE FOREST, ILLINOIS

Charles Platt, Architect and Landscape Architect. Phelps Wyman, Collaborating



The Architectural Record

January, 1924

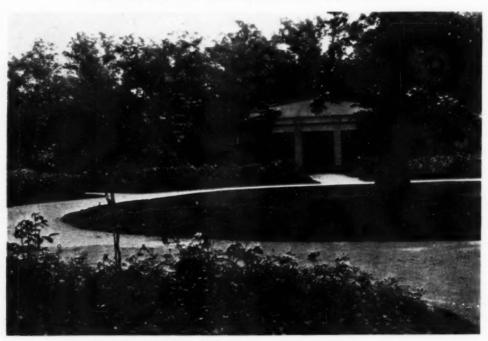
PLAN OF ESTATE OF T. E. DONNELLEY, ESQ., LAKE FOREST, ILLINOIS

Howard Shaw, Architect

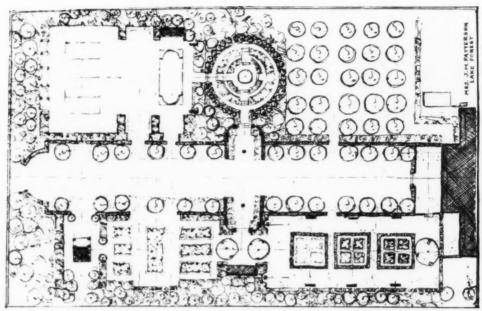
Gardens by Howard Shaw and H. R. White



VEGETABLE GARDEN, ESTATE OF T. E. DONNELLEY, ESQ., LAKE FOREST, ILLINOIS Howard Shaw, Architect. Gardens by Howard Shaw and H. R. White

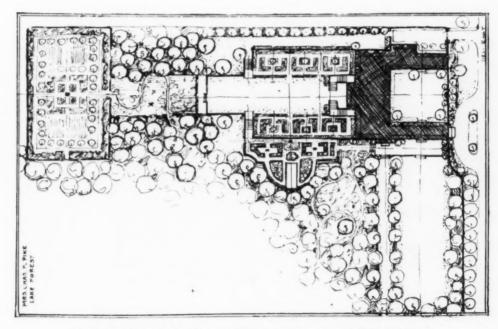


Vegetable Garden and Rest House
ESTATE OF MRS. EDITH ROCKEFELLER McCORMICK, LAKE FOREST, ILLINOIS
Charles Platt, Architect and Landscape Architect. Phelps Wyman, Collaborating



PLAN OF ESTATE OF MRS. J. M. PATTERSON, LAKE FOREST, ILLINOIS

Howard Shaw, Architect
Ralph Rodney Root, Landscape Architect



PLAN OF ESTATE OF MRS. CHARLES A. PIKE, LAKE FOREST, ILLINOIS

Robert Work, Architect
Ralph Rodney Root, Landscape Architect



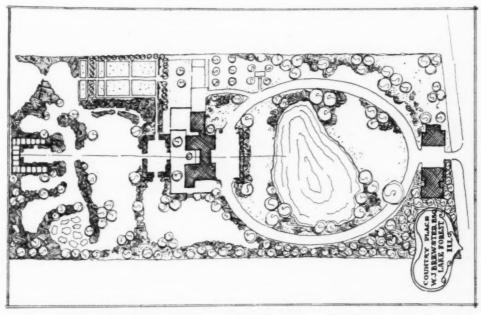
The Architectural Record

The gardens give vista to the natural landscape

RESIDENCE OF WALTER J. BREWSTER, ESQ., LAKE FOREST, ILLINOIS

Howard Shaw, Architect

Mrs. Walter J. Brewster, Landscape Gardening



PLAN OF ESTATE OF WALTER J. BREWSTER, ESQ., LAKE FOREST, ILLINOIS
Howard Shaw, Architect
Mrs. Walter J. Brewster, Landscape Gardening

by climatic and soil conditions and our design by desire for space and breadth of view, have brought about a type of estate development that is fast becoming peculiar to this one section of the coun-

The organization of the several areas that compose a country place has been carefully thought out, and we have a well working plan with divisions into entrance way, lawns, gardens and service portions. The strong lines and masses of the plan, determined by principles of utility, furnish a basic design upon which the many details that go to make up a

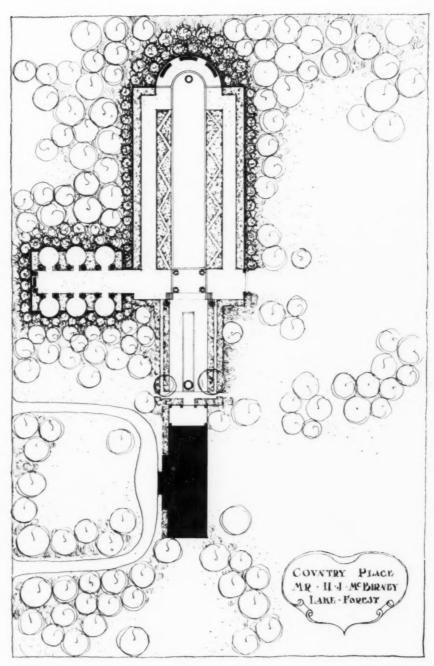
modern country home can be arranged. The entourage of ample open and wooded areas, with the house and its terraces, gardens and courts forming the focal point from the main vistas and itself the principal viewpoint looking out through the vistas, gives a certain magnificence and grandeur that one finds in the gardens of the Renaissance. In emphasis of dominant view, our designers have kept the elements of the garden reduced to a minimum, with the result that we achieve not only an harmonious relationship with the surrounding landscape but obtain an effect of pleasing simplicity as well.



The Architectural Record

January, 1924

Water Garden
ESTATE OF H. J. McBIRNEY, ESQ., LAKE FOREST, ILLINOIS
Howard Shaw, Architect
Planting by Rose Nichols, Landscape Architect



The Architectural Record

January, 1924

PLAN OF ESTATE OF H. J. McBIRNEY, ESQ., LAKE FOREST, ILLINOIS Howard Shaw, Architect

Planting by Rose Nichols, Landscape Architect



Residence

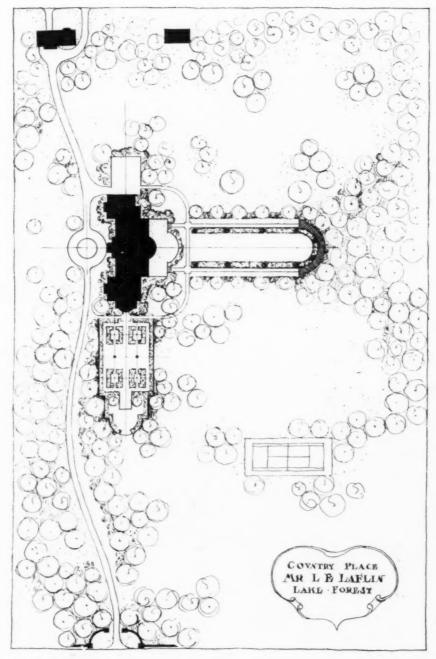


The Architectural Record

View from house entrance

January, 1924

RESIDENCE OF L. E. LAFLIN, ESQ., LAKE FOREST, ILLINOIS Robert D. Kohn, Architect. Rose Nichols, Landscape Architect



The Architectural Record

January, 1924

PLAN OF ESTATE OF L. E. LAFLIN, ESQ., LAKE FOREST, ILLINOIS Robert D. Kohn, Architect. Rose Nichols, Landscape Architect

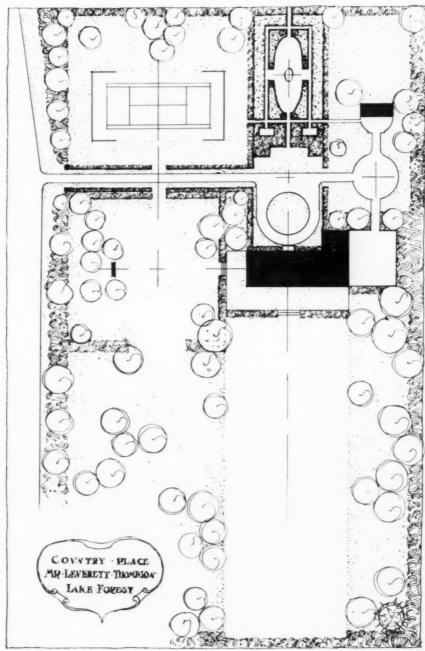


Formal Garden



The Architectural Record

Flower Garden
ESTATE OF L. E. LAFLIN, ESQ., LAKE FOREST, ILLINOIS
Robert D. Kohn, Architect Rose Nichols, Landscape Architect
[16]



The Architectural Record

PLAN OF ESTATE OF LEVERETT THOMPSON, ESQ., LAKE FOREST, ILLINOIS

Howard Shaw, Architect

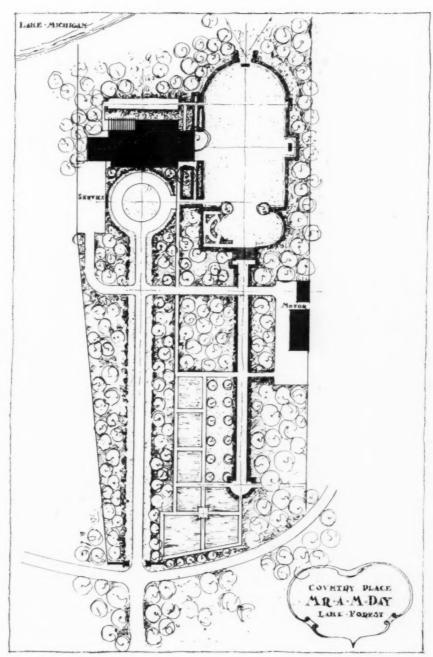
Charles Platt, Landscape Architect. Rose Nichols, Planting



The Architectural Record

January, 1924

Flower Garden
ESTATE OF A. M. DAY, ESQ., LAKE FOREST, ILLINOIS
James Gamble Rogers, Architect and Landscape Architect



The Architectural Record

January, 1924

PLAN OF ESTATE OF A. M. DAY, ESQ., LAKE FOREST, ILLINOIS

James Gamble Rogers, Architect and Landscape Architect



The Architectural Record

January, 1924

Garden and lawn from motor turn
ESTATE OF A. M. DAY, ESQ., LAKE FOREST, ILLINOIS
James Gamble Rogers, Architect and Landscape Architect



The Architectural Record

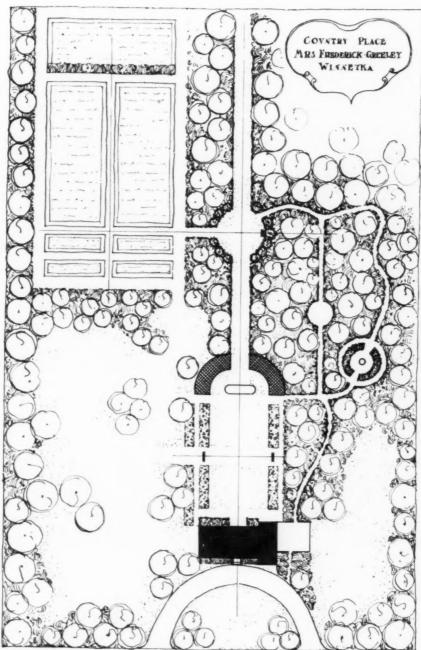
January, 1924

Residence from south lawn
ESTATE OF A. M. DAY, ESQ., LAKE FOREST, ILLINOIS
James Gamble Rogers, Architect and Landscape Architect



The Architectural Record

January, 1924



The Architectural Record

January, 1924

PLAN OF ESTATE OF MRS. FREDERICK GREELEY, WINNETKA, ILLINOIS Lawrence Buck, Architect

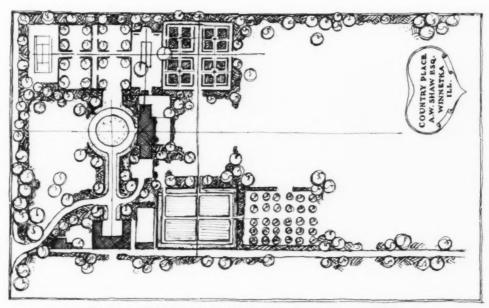


ESTATE OF A. W. SHAW, ESQ., WINNETKA, ILLINOIS Clark & Walcott, Architects Root & Hollister, Landscape Architects



The Architectural Record

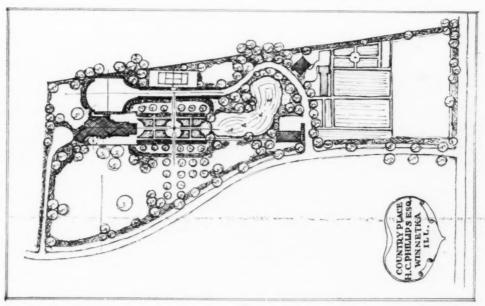
ESTATE OF HOWARD C. PHILLIPS, ESQ., WINNETKA, ILLINOIS Clark & Walcott, Architects Root & Hollister, Landscape Architects



PLAN OF ESTATE OF A. W. SHAW, ESQ., WINNETKA, ILLINOIS

Clark & Walcott, Architects

Root & Hollister, Landscape Architects



The Architectural Record

January, 1924

PLAN OF ESTATE OF HOWARD C. PHILLIPS, ESQ., WINNETKA, ILLINOIS

Clark & Walcott, Architects

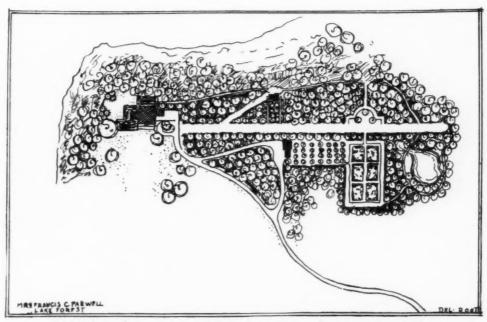
Clark & Walcott, Architects Root & Hollister, Landscape Architects



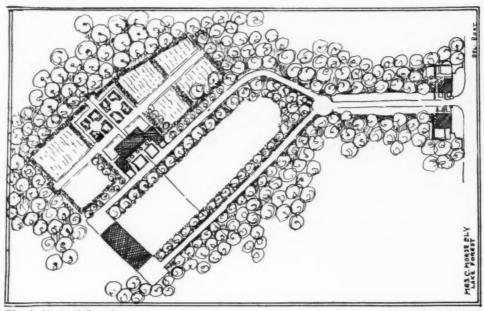
The Architectural Record

January, 1924

Bog Garden
ESTATE OF FRANCIS C. FARWELL, ESQ., LAKE FOREST, ILLINOIS



PLAN OF ESTATE OF FRANCIS FARWELL, ESQ., LAKE FOREST, ILLINOIS
Arthur Huen, Architect
Alfred Yeoman, Landscape Architect of Rose Garden



The Architectural Record

PLAN OF ESTATE OF MRS. C. MORSE ELY, LAKE FOREST, ILLINOIS

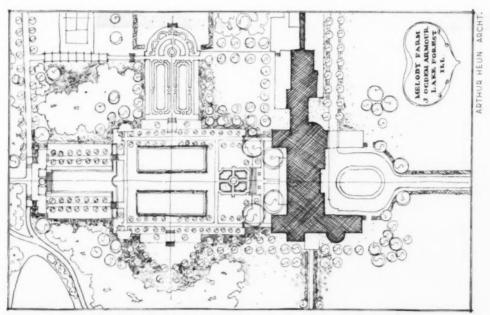
H. C. Dangler, Architect



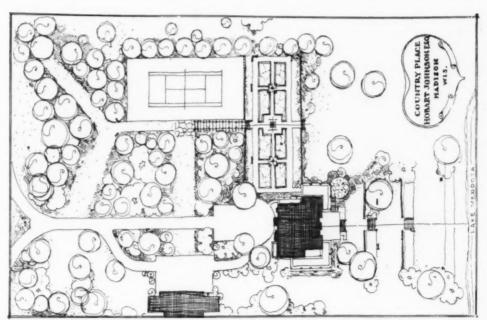
The Architectural Record

January, 1924

Garden
ESTATE OF J. OGDEN ARMOUR, ESQ., LAKE FOREST, ILLINOIS
Arthur Huen, Architect and Landscape Architect



PLAN OF ESTATE OF J. OGDEN ARMOUR, ESQ., LAKE FOREST, ILLINOIS Arthur Huen. Architect and Landscape Architect



The Architectural Record

January, 1924

PLAN OF ESTATE OF HOBART JOHNSON, ESQ., MADISON, WISCONSIN Root & Hollister, Landscape Architects

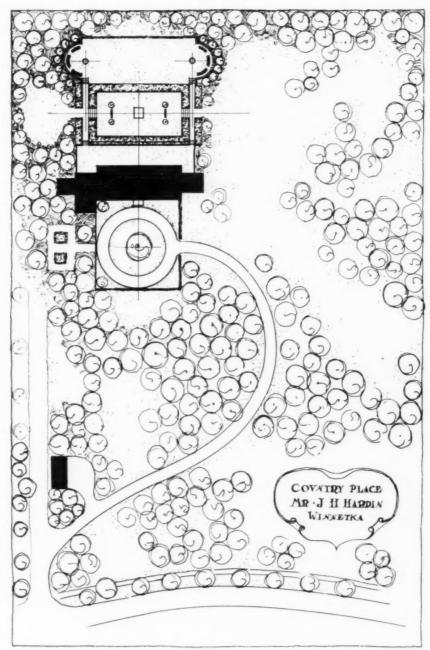


The Architectural Record

January, 1924

Maple Walk

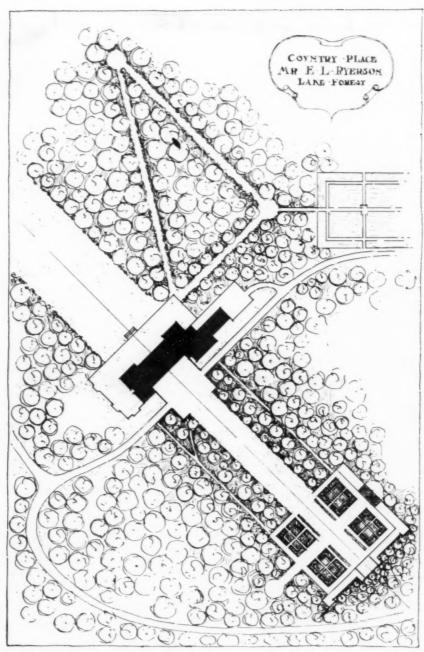
ESTATE OF J. OGDEN ARMOUR, ESQ., LAKE FOREST, ILLINOIS
Arthur Huen, Architect and Landscape Architect



The Architectural Record

January, 1924

PLAN OF ESTATE OF J. H. HARDIN, ESQ., WINNETKA, ILLINOIS
Howard Shaw, Architect
Garden Planting by Mrs. J. H. Hardin



The Architectural Record

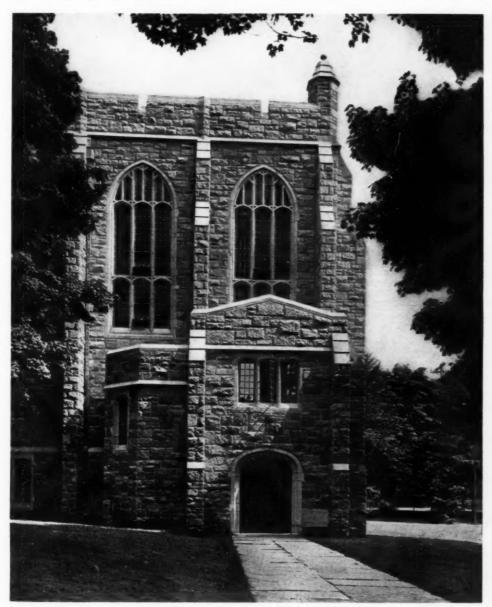
January, 1924

PLAN OF ESTATE OF E. L. RYERSON, ESQ., LAKE FOREST, ILLINOIS

Howard Shaw, Architect Rose Nichols, Landscape Architect

PORTFOLIO

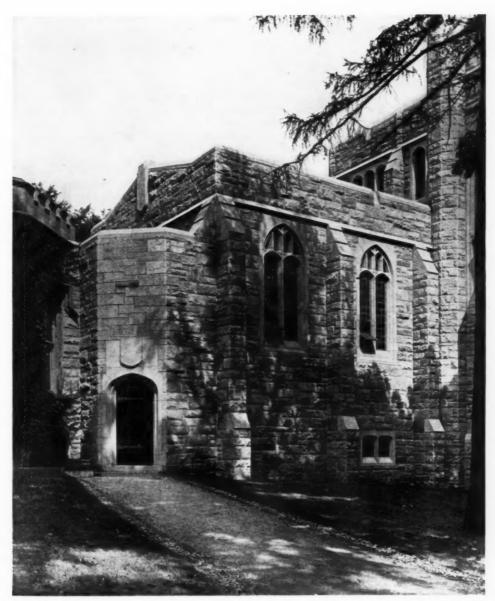
CVRRENT, ARCHITECTVRE



The Arghitectural Record

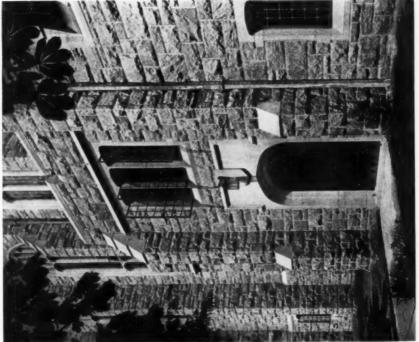
Јаниагу, 1924

CHAPEL FOR COLLEGE OF NEW ROCHELLE, NEW ROCHELLE, NEW YORK Richard H. Dana, Jr., Architect



The Architectural Record

January, 1924

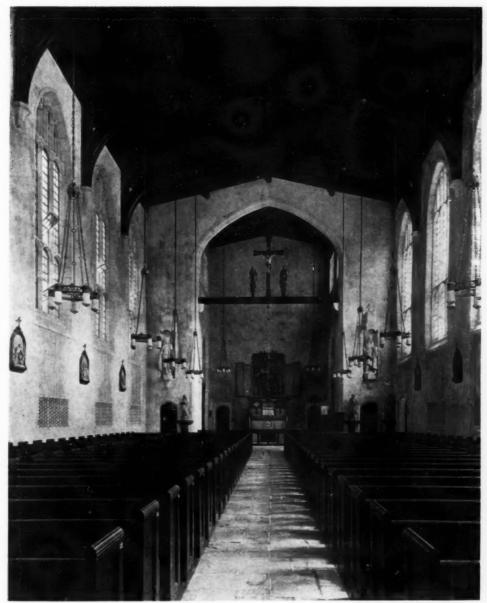


January, 1924



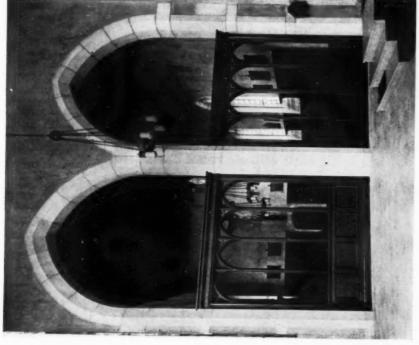
The Architectural Record

CHAPEL FOR COLLEGE OF NEW ROCHELLE, NEW ROCHELLE, NEW YORK Richard H. Dana, Jr., Architect



The Architectural Record

January, 1924



January. 1924



The Architectural Record

CHAPEL FOR COLLEGE OF NEW ROCHELLE, NEW ROCHELLE, NEW YORK Richard H. Dana, Jr., Architect

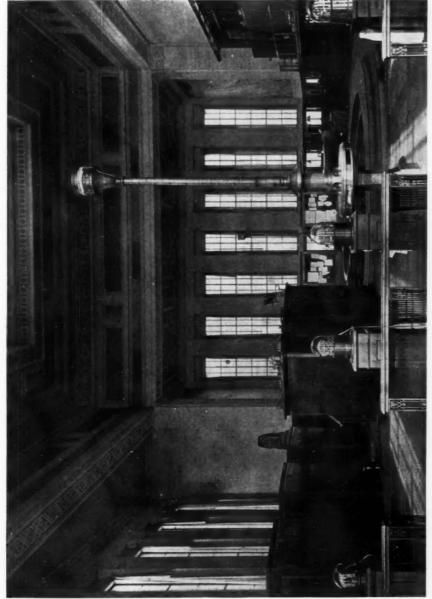
Sirendectural firery



The Architectural Record

January, 1924

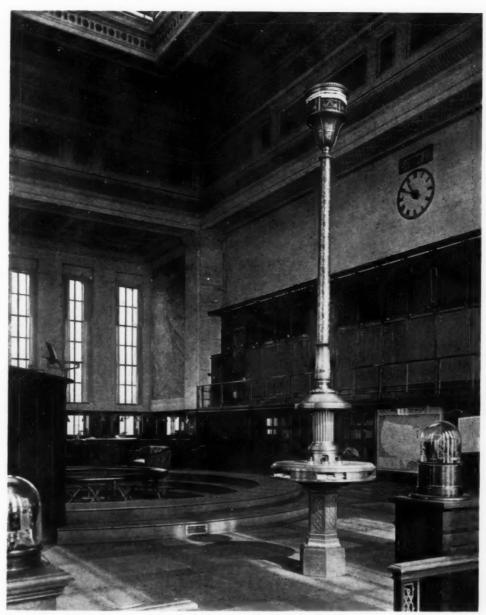
___intectural



The Architectural Record

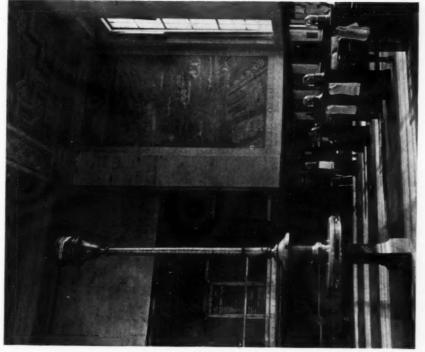
January, 1924

NEW YORK COTTON EXCHANGE, NEW YORK CITY Donn Barber, Architect



The Architectural Record

January, 1924







The Architectural Record

NEW YORK COTTON EXCHANGE, NEW YORK CITY Donn Barber, Architect





The Architectural Record

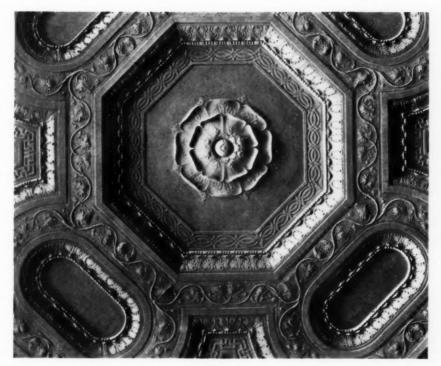
January, 1924

NEW YORK COTTON EXCHANGE, NEW YORK CITY Donn Barber, Architect

Mountain.

Library







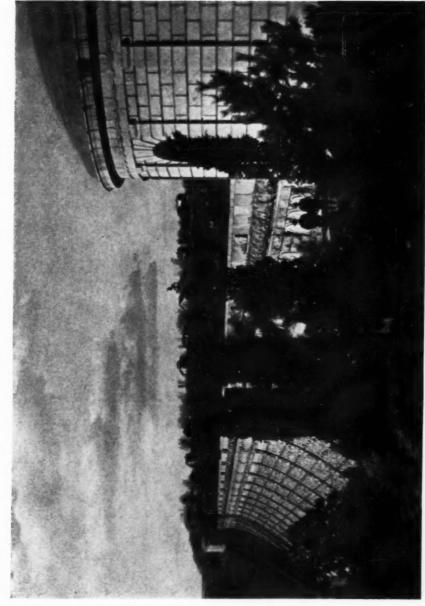
The Architectural Record

Details of Celling

NEW YORK COTTON EXCHANGE, NEW YORK CITY

Donn Barber, Architect

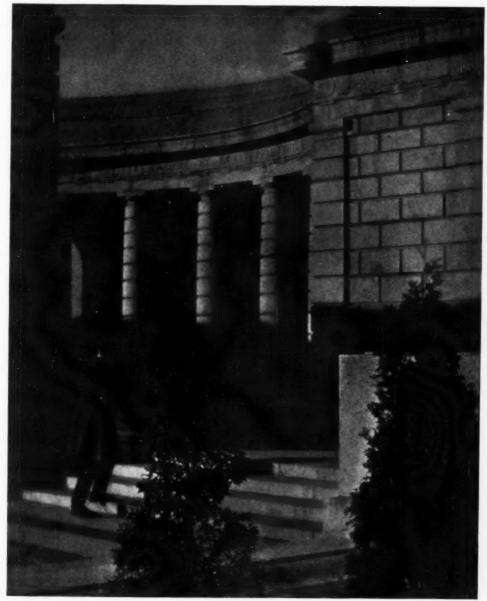
Architecto



The Architectural Record

January, 1924

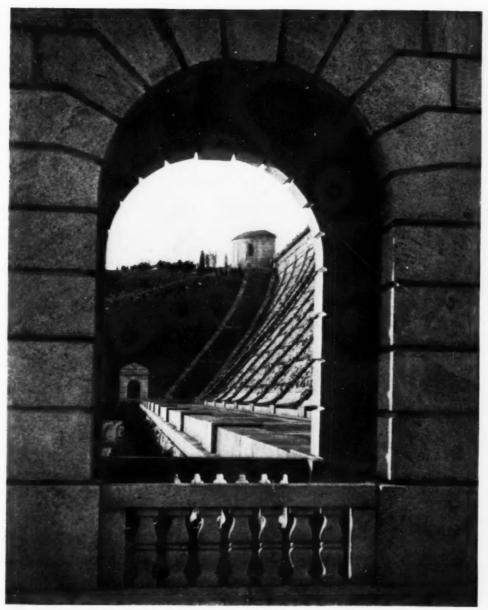
KENSICO DAM, KENSICO, NEW YORK York & Sawyer, Architects



The Architectural Record

KENSICO DAM, KENSICO, NEW YORK York & Sawyer, Architects

January, 1924

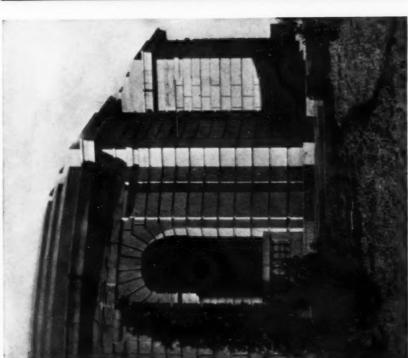


The Architectural Record

January, 1924

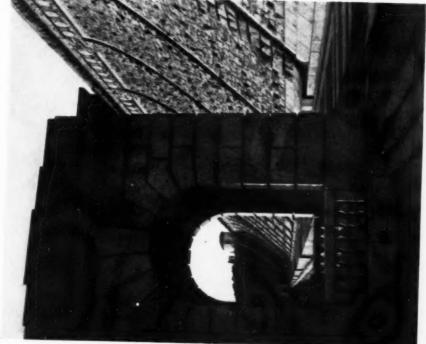


January, 1924

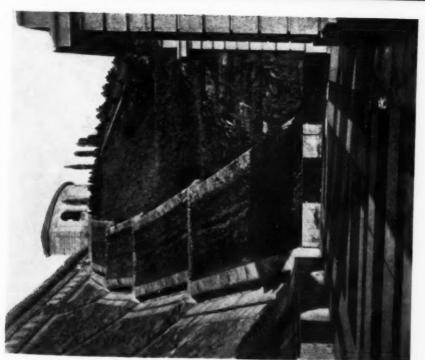


The Architectural Record

KENSICO DAM, KENSICO, NEW YORK YORK YORK & Sawyer, Architects



Јапиату, 1924



The Architectural Record

KENSICO DAM, KENSICO, NEW YORK York & Sawyer, Architects

Architectural

l ibrary

ANDALUSIAN GARDENS AND PATIOS



Mildred Stapley and Arthur Byne Photographs and Drawings made expressly by the Authors

PART II - TYPES of GARDENS

Andalusian gardens are of two types, flat and hillside. Having said that gardens are to be sought in or near cities rather than forming part of isolated country seats, one need not be surprised to hear that the once great cities of Seville and Cordova on the broad banks of the Guadalquivir, are the best centers for studying the flat garden; Granada and Ronda, high in the Sierra, for the hillside. There are only these two extreme types. Gently rolling stretches dotted with bouquets d'arbres do not enter into the scheme of Spanish topography.

The theory of the flat garden is a series of outdoor rooms walled apart by masonry and open to the sky; sometimes they are again subdivided by lower walls of hedge, or are quite roofed over by lowgrowing trees, always evergreens; in the center almost invariably a fountain. The enclosures are referred to as patios, like that within the house, and are denominated according to the plant principally featured—patio of the orange trees, of the black bamboo, of the palm, of the box, This conception of the garden, it will be seen, does not accommodate long alleys nor large pools of water. Squarish in form, the quadrangles rarely exceed forty feet to a side (we are speaking now of the private garden, not of a royal park like the Alcazar). Dividing walls are of white stucco and have, besides the connecting opening, several arched windows with grilles or rejas through which pleasant vistas can be had. Walks are either paved with glazed tiles or river pebbles, or are made of colored earth tamped firmly down, an expedient also practiced by Italian and Dutch gardeners. Around

the flower beds and circular openings for trees are borders of colored tile. The object of this series of walled quadrangles is obvious; except for the few meridian hours of the day the walls, eighteen to twenty feet high, are casting their grateful shadow on either one side or the other.

Back of the garden for recreation was the *huerta*, for vegetables and fruit. Here rigid distinction was observed between the useful and the ornamental. Flowers seldom intruded into its precincts. In contrast to the garden the huerta was quite devoid of shade—open to the sun to ripen quickly the successive crops of the year.

The hillside garden is an alternation of sequestered courts and open terracing, the topography determining which predominates. The site was chosen for its views townward, and afforded the Moorish gardener the opportunity to display that which he most excelled in-the arrangement and distribution of water. Here, too, walls played a great part, introduced even where not structurally necessary just because their white expanse was apparently considered an indispensable background. Outer or confining walls, especially if they surmounted an inaccessible cliff-side, were generally pierced with arched clairvoyées to reduce the distant view to a series of separate compositions. Another note of great interest was the stairway connecting the different levels—sometimes of azulejos. sometimes of unglazed flat tiles, sometimes of ordinary brick (the Roman type).

Both types of garden, flat and declivit-

ous, were cheap to construct and to maintain. Even allowing for the cost of quarrying and terracing a hillside, the fact that no rich materials entered into its embellishment made it comparatively inexpensive—but little or no marble, no carved balustrading, no rusticated walls, no mosaics, no porphyry—all this meant much in the way of economy.

Another observation that applies to both types of garden is that green is a predominating note and that deciduous trees

are practically ab-Among trees sent. that hold their green the decorative and odorous citrus family were favorites; next came the more serious cypress and the low-growing box. orange tree, needless to say, could always be bedded and was not planted in tubs as in less friendly climates. Either it was formally set out in a hollowed circle and the circles connected by open conduits; or planted close so that the foliage formed a dense canopy; or plashed against the Other fruitbearing trees, though beautiful in flower, appear to have been ignored because of

their naked season. The cypress of tall symmetrical habit and planted in pairs lent itself to training into an arch. Box was used prodigally, as it can be only in a garden where abundant bloom is not expected, for it, like the eucalyptus, consumes all the strength of the soil. Box in form of hedges, box in isolated clumps, box in single bushes clipped into a sphere or other geometric form. Of elaborate topiary work there was none.

In this respect, as the Moor seldom fashioned the image of any living thing in the round we may presume this to be his reason for avoiding an art familiar to the Persians and Egyptians from whom, especially the former, the Moors borrowed extensively. The only attempt we have seen in an old garden at form and delineation in box is a parterre composed of the insignia of the great Spanish military orders, and this device must necessarily date from Christian and not Moorish régime.

But if the Moor avoided the practice

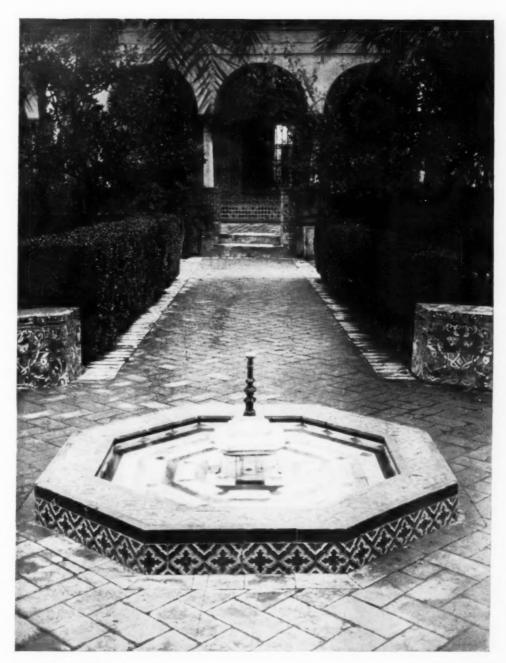
of topiary he was not averse to clipped evergreens in the form of labyrinths. Box, cypress, myrtle, juniper, sometimes holly, were used, preference going to the aromatic greens. In fact, the maze so appealed to the oriental mind that hardly a garden was without one. though it might have been no more than twelve feet square. A specially fine maze formed part of the Alcazar gardens as originally laid out, but during one of the many changes wrought by the Emperor Charles V it was decided to uproot it and substitute an Italian parterre. The Emperor



Insignia of the military orders planted in box in the sixteenth century GARDENS OF THE ALCAZAR, SEVILLE

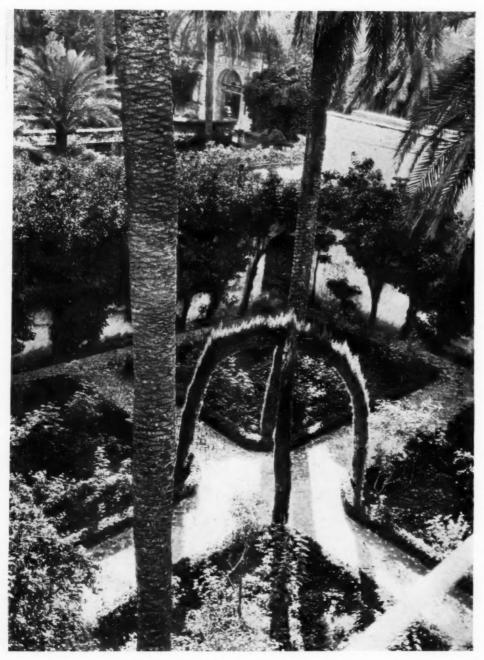
however appears to have fancied the Moorish maze sufficiently to deter its destruction until the plan had been carefully drawn up and baked into a tile panel; this tile was then embedded in the pavement of his little pavilion where it may still be seen. The labyrinth is known to have been replanted elsewhere according to this plan, but only to again come to grief, for the one seen to-day at the extreme rear of the garden is of quite late date.

Flower beds are not of prime importance in the Spanish garden, flowering



The Architectural Record

January, 1924



The Architectural Record

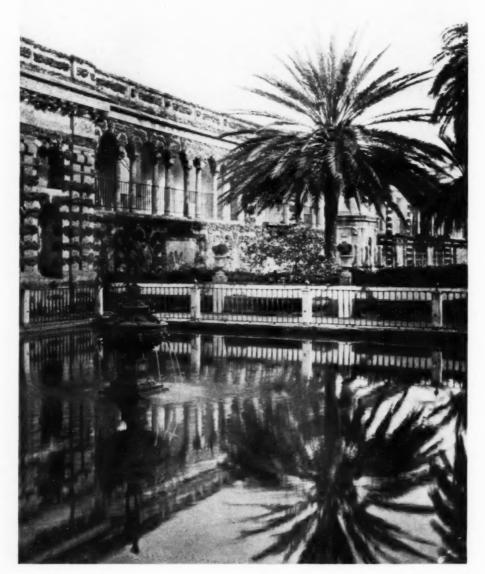
The theory of the flat garden is a series of walled enclosures open to the sky

GARDENS OF THE ALCAZAR, SEVILLE



The Architectural Record

January, 1924



The Architectural Record

January, 1924



Brick rotunda adorned with tiles PARQUE DE MARIA LUISA, SEVILLE

plants being displayed in pots and the color scheme changed frequently. Every flower known to northerners grows in Andalusia, and in addition, the sub-tropical list; no month of the year is without its bloom. Roses and chrysanthemums when grown against a southern wall bloom all winter long. The amaranth is more graceful and feathery and vivid than we have seen it elsewhere; the cockscomb attains the proud length of eighteen inches; the geranium is of giant proportions as in Australia, and often pleached against a wall to a height of eighteen or twenty feet. A weird, exotic plant called monasterio delicioso has big, curiously open-worked leaves and a long heavy tendril liked coiled wire; though aridlooking it requires much water.

Many of the exotic plants were brought to Spain by Abderrhaman I, first of the Omeyhad sultans, who was a great horticulturist and who sent to Syria and India for rare shrubs and seeds never before planted in European soil. It was this sultan who introduced the date palm into Spain; likewise the pomegranate (la granada) which, after the Christians wrested the Moorish kingdom of Granada from the Mohammedans, became a national emblem. According to the book of Abuzacaria (twelfth century) there had been brought into Spain jasmine and blue and yellow roses. The jasmine still perfumes the air, but the blue and yellow roses appear to have received no Christian encouragement.

Grass, tender, succulent grass such as makes the northern lawn, is unknown in Andalusia. If a few plots have been coaxed into life in the modern Seville gardens this is an exception due to special provision for watering it (and, besides, the gardens were designed by a Frenchman). The axiom "when at a loss what to plant use grass" did not help the Moorish gardener. But he devised another sort of green carpet—wandering Jew.



The Architectural Record

Green was the predominating note in the Spanish garden

GENERALIFE GARDENS, GRANADA

[72]

ground ivy and myrtle, Iceland moss, hen and chickens, all planted thick and constantly snipped back into flatness. In this way a whole bed of green is obtained, as well as neat orderly borders.

For the small flat garden the system of planting is necessarily concentrated. since a large part of the area is given over to tiled pavement. The square, or patio, is laid out with paths, four to eight radiating from the central fountain. Borders may be of the green sort just described or of colored tiles (azulejos) alone; or the strip of green may be confined within two rows of azulejos. The bed area is usually green save for one or two flowering plants; or it may be of black earth kept well turned and dotted with two or three plants; or more rarely it may be a flower bed, all of one kind, thus giving a definite color group. Where the green bed has a tree in its center a generous circle of earth is left around the trunk and this earth is frequently hoed up in order to invite air and moisture into the soil.

This same general layout can be enlarged upon-box hedge, for instance, within a curb of tile or cement, lower border of dense ivy or myrtle, then turned up earth, then shrubs, and finally the central circle for the tree. Each patio is a complete unit of pattern at small scale and capable of repetition, which, after all, is the underlying theory of all oriental de-

sign.

Where the patios of the flat garden are set out in rows of orange, magnolia, or pepper trees, the area is carefully lined off by irrigating furrows which are kept neatly banked. In the case of large trees like the magnolia (which here attains great size) a dense little grove of bamboo is planted under them, inviting by its additional coolness; or a bed of shade-

loving plants.

It is interesting to examine the manner of planting around the base of the dividing walls. A strip of earth about two feet wide is excavated to a foot or more below the level of the perimeter path, and down here where their roots cannot raise the tiles or bricks of the walk are planted the vines or trees that are to be

pleached against the wall. Among the former are the bougainvillea, lantana (which here is both a large shrub and a vine), and the grape; among the latter, the orange, lemon, geranium, and the cypress, this kept well wired and clipped back flat to the wall. The interest of the cypress or other evergreens is enhanced by the patterns of the dark stems against the white stucco and the limited amount of green which is permitted to show itself. Where the purple or orange of flower or fruit enters into the decoration less attention is paid to the design of the stems. Of low planting against walls there was practically none. Considering that this space would be devoted to an herbaceous border of rich and varied bloom in an English garden, a greater difference in the two ways of treating it could hardly be imagined.

We have said nothing about the walks that intersect the small units of the flat

garden, and always in straight lines. Most often they are paved in tiles, and tiles as a garden embellishment will be taken up presently; but also, and with very chic effect, they are made of a bright ochre clay well rolled down. Between the yellow path and the black earth of the planted bed there is often a strip of reddish earth held in place by a tile edging or cement coping. This interesting and decorative use of colored earths, renewing them frequently that they may look fresh, appears to be of Persian origin, and was revived in Europe in Renaissance gardens through the influence, probably, of Moorish Spain. Two attractive examples of the yellow clay paths are the Convento de la Merced garden and that

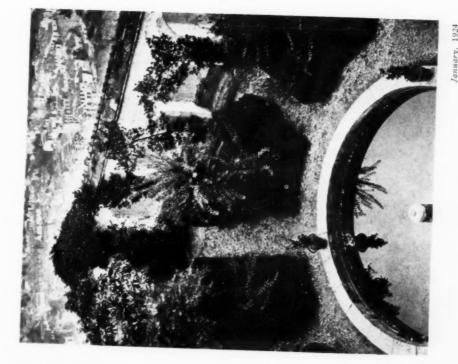
of the Medinaceli palace, both in Seville. Water, seen and heard, was a more indispensable part of the garden design than plants themselves. Arid Spain was made fertile by Moorish irrigation. The Moors were great hydraulicians and what one sees to-day of scientific irrigation is but a miserably small fraction of what they left when driven out of the Peninsula. In using water as a decorative adjunct to the garden the scarcity of the supply influenced the manner of its application. A very little had to be made to look like

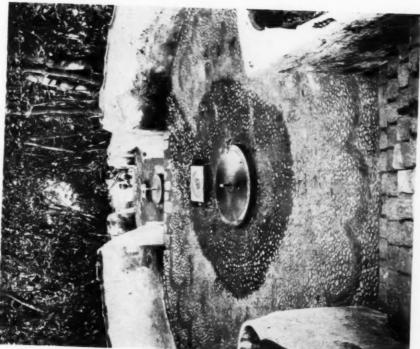


The Architectural Record

Pebbled pavement at entrance
GENERALIFE GARDENS, GRANADA

January, 1924





The Architectural Record

Stair with circular landings, water carried down the top of the parapet

The site of the hillside garden was chosen for its views townward

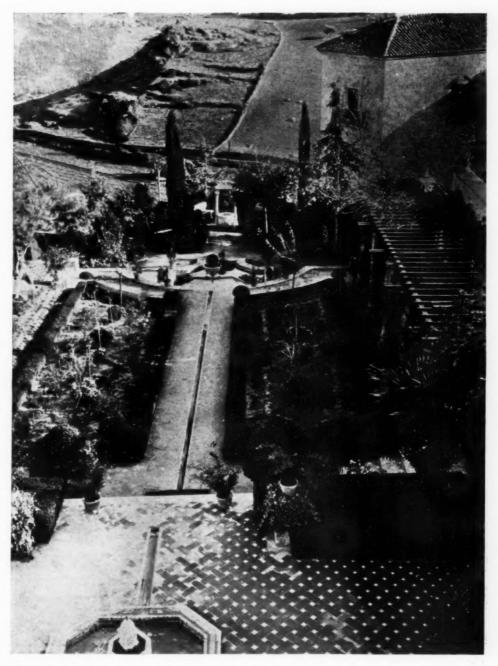
GENERALIFE GARDENS, GRANADA



The Architectural Record

Central canal of principal enclosure
GENERALIFE GARDENS, GRANADA

Јапиату, 1924

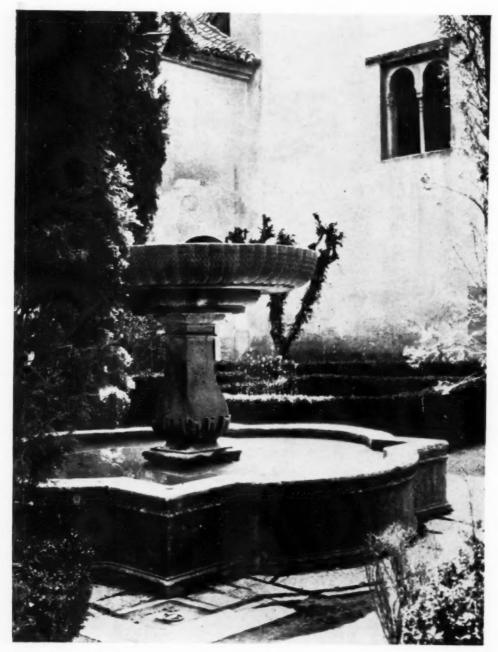


The Architectural Record

Water carried in runlets from terrace to terrace

GARDEN OF THE CASA DEL REY MORO, RONDA

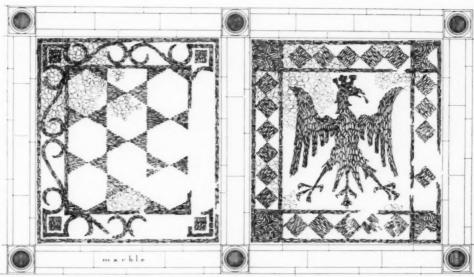
January, 1924



The Architectural Record

January, 1924

Marble fountain consisting of a Moorish tazza supported on a Renaissance pedestal ${\bf THE\ ALHAMBRA,\ GRANADA}$



PATIO WALK LAID IN GRAY AND WHITE PEBBLES

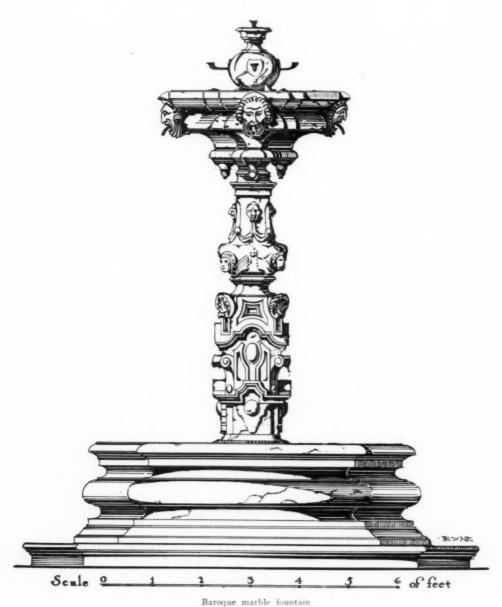
Two units of a garden walk laid in gray and white pebbles GRANADA

a great deal. Artificial lakes therefore could not be dreamed of, nor even pools of any size with their aquatic plants and birds and their little islands connected by pretty toy bridges. Water was too precious to lie silent in a broad expanse; it had to be confined in terra cotta canals and made to murmur through all its course. There was no periodical flooding of the entire area, nor wasteful flowing through earth ditches; instead, the thin stream was held to its course so that no drop escaped to nourish where not necessary. Diminutive conduits ran from tree to tree, from shrub to shrub. In the case of terraces besides the open canal disappearing under the steps, the concave ramp of the stair itself might conduct water from an upper fountain to a lower. Whatever served this purpose, it was open and visible, and the water was made to show itself in as many places as possible before it was carried off to the more utilitarian huerta.

This endeavor to squeeze out the last drop has resulted in special designing of fountains and basins. The pool of a spouting fountain, for instance, is not drained as it would be elsewhere; that is

to say, there is not a waste below the rim of the basin, for then the effect of the play of water on the edge would be lost. As it is, it glides over, sparkles in the sun and increases the luster of the tiles in so doing, then is caught in an outer gutter and carried off in an open canal. Basins of marble or stone have their outer brim faceted, by which device the volume of water spilling over seems augmented. Still another trick to produce the same illusion is to make the water reflect. Fountains are of glazed tile not merely because baked and enameled earthenware was a popular and inexpensive material but also because its glazed surface makes a thin film of sunlit water gliding over seem greater in volume. Tiled paths are sprayed from minute jets not only to freshen and cool them but also to make them reflect and sparkle like a flowing stream.

These economical yet effective ways of using water in Spanish gardens offer a marked contrast to the copious *jets d'eau* and rushing cascades of the north (pathetically dry except on fête days). Wherever water has to be "used with due regardful thrift," the Andalusian way is



PALACE OF THE MARQUES DE PENAFLOR, ECIJA

worth studying. In our own southwest where it costs more to water the garden than to heat the house, it offers a valuable suggestion; and in more than the use of water, for the similarity of climate and growth also favors the Spanish tradition.

THE BUILDING OF THE

AMERICAN TELEPHONE & TELEGRAPH COMPANY

Welles Bosworth, Architect By KENNETH CLARK

IN THE American Telephone and Telegraph Company's building the use of Greek motives seems to reach a point beyond which it would be hard to go. It is a far cry from the Parthenon to the skyscraper, but that the two can be intimately related to each other with respect to detail, unities and motives is proved by the executed building that forms the subject of this article. can hardly picture a succession of Greek temples piled one upon the other, and yet the solution of just this part has been worked out by Mr. Bosworth, in the heart of downtown New York. The general scheme of the exterior was inspired by records that have come down to us of a structure, containing seven stories of columns, erected by Septimus Severus upon the side of the Palatine Hill in Rome.

The purpose of the design was to convey a feeling of horizontality—to give an impression of a masonic structure carrying a message of solidity and permanence, in style as well as form, the public service conducted by the American Telephone and Telegraph Co.; and any superficial effect for advertising or financial display was to be avoided.

The first story is of the Doric order, the order of the Parthenon, of which these columns, though a few feet shorter, are copies; and very exactly and beautifully are they done, for the care with which the details have been drawn and executed is one of the strongest points to be admired throughout the entire building; everywhere is evidence that proves the exactness of our modern knowledge of Greek archaeology and architectural forms.

Above the basic Doric colonnade are eight tiers of the Ionic order, the columns copied from the recently excavated Temple of Sardis, in Asia Minor; and, following another ancient precedent, as in the Library of Pergamon, they are

joined by a screen wall at a point at onethird of their height, which adds to the solidity of effect and gives opportunity for contrast with the upper two-thirds of the bays, where the windows are grouped in connecting bronze frames.

The façades are crowned with a solid parapet wall which ties the elements well horizontally and give a mass against the sky that a pierced wall would lack,

All the exterior masonry is of granite, from Bethel, Vermont. It was shipped, after being cut, to a yard in Long Island City, and from there was supplied to the building as needed, in this way obviating any delay that might have been caused by shipping direct from the quarry.

The treatment of the bronze grille work between the columns on the Broadway front, is notable in that each bay. over the doorways, has for a central motive, a panel modelled by Mr. Paul Manship. The subjects are: Earth, Air, Fire and Water. The inspiration for these panels was derived from the famous figures on the Tower of the Winds at Athens, and these modern derivations stamp the artist as one of the greatest of decorative sculptors. Almost Oriental in their richness and fullness of effect, and superb in execution, these panels will live as a joy forever and had they emerged from the largess of the Renaissance Period, the columns framing them would have been decorated with the sonnets of their admirers. As it is in blasé modern New York that they have appeared, the passerby barely glances at them. It remains for a future age to place them where they belong, in some museum, to be studied and admired as they deserve.

The sculptor's facile hand has added at other points to the beauty of the building. For instance, inside the doors are bronze floor panels representing Mercury carrying the messages of the gods. The bronze drinking fountains throughout the building were from Mr. Manship's models



The Architectural Record

THE AMERICAN TELEPHONE & TELEGRAPH COMPANY BUILDING, NEW YORK CITY

Welles Bosworth, Architect



Bronze Panel Over Entrance
THE AMERICAN TELEPHONE & TELEGRAPH COMPANY BUILDING, NEW YORK CITY
Welles Bosworth, Architect

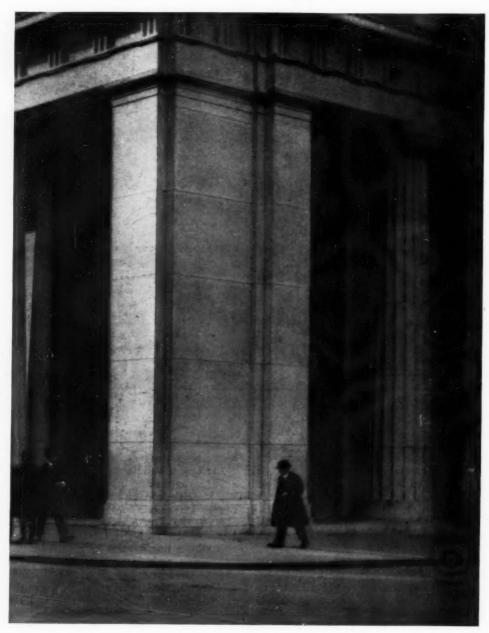
and the frieze of child figures, in marble, over the elevator doors, was conceived and modelled by him for the old building, to be carried on in the new portion by Mr. LaChaise during Mr. Manship's absence abroad.

Almost the entire first floor of the building is given over to the monumental vestibule, which is really a Greek hypostyle hall, possessing in size and scale some of the impressiveness that the Egyptian Temples must have had with their forests of columns and the vistas of dignity and grandeur between them. In this vestibule the order of the Parthenon has again been used, and above the columns a ceiling in color adds a fitting roof for all this dignity.

The columns and walls are of Istrian and Botticini marbles, whose warm, soft tone gives a restful feeling of color to the

whole. In this vestibule, as on the exterior of the building, it is the detail that attracts the seeking eve, for in everything is evident the care and thought with which the ancient models have been followed. Here is the directory board, framed with Ionic columns of the Parthenon period, and with a fine cornice bearing a beautifully cut Greek fret ornament, and here are the elevator grilles and cars of bronze, and the chandeliers with their motives derived from the Greek oil lamp, and the letter box of marble, for the use of which material special permission had to be obtained from the powers that be in Washington; all these show a masterly care in the designing of the small things that go to make a successful whole.

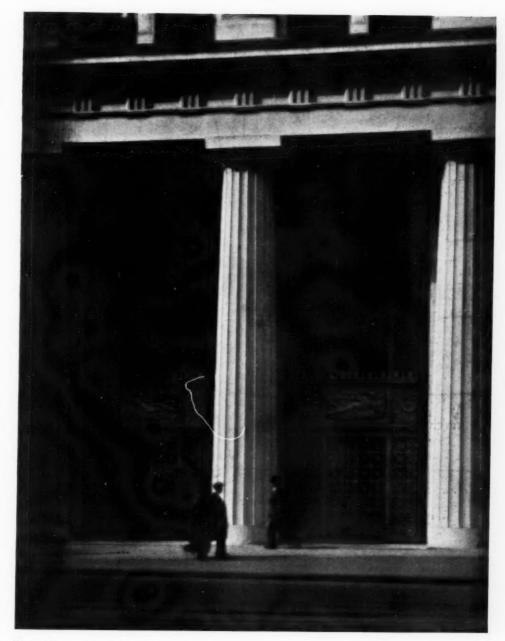
To realize the true scale of this hall it should be seen at night; the play of light on the highly polished walls and columns



The Architectural Record

January, 1924

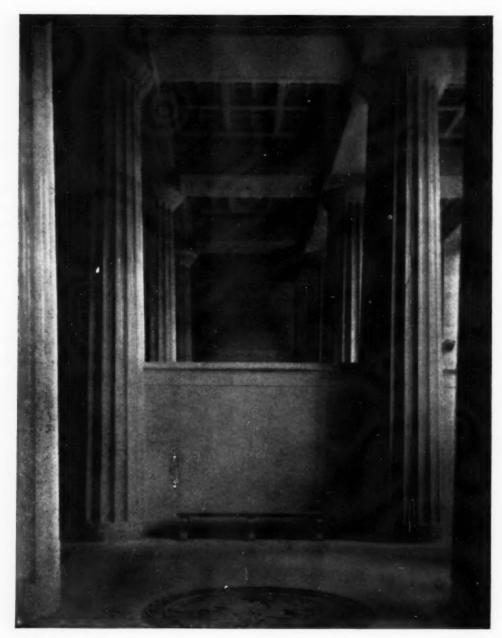
THE AMERICAN TELEPHONE & TELEGRAPH COMPANY BUILDING, NEW YORK CITY Welles Bosworth, Architect



The Architectural Record

January, 1924

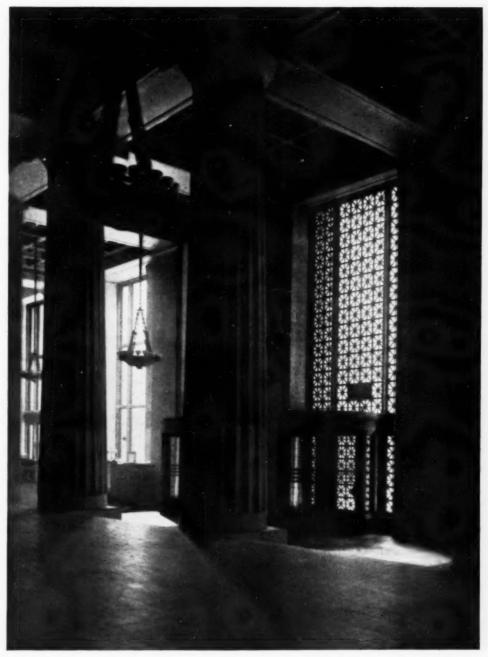
THE AMERICAN TELEPHONE & TELEGRAPH COMPANY BUILDING, NEW YORK CITY Welles Bosworth, Architect



The Architectural Record

January, 1924

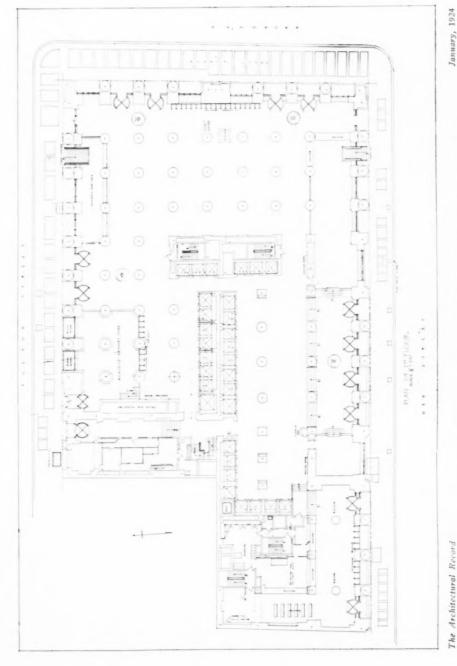
THE AMERICAN TELEPHONE & TELEGRAPH COMPANY BUILDING, NEW YORK CITY Welles Bosworth, Architect



The Architectural Record January, 1924

THE AMERICAN TELEPHONE & TELEGRAPH COMPANY BUILDING, NEW YORK CITY

Welles Bosworth, Architect



THE AMERICAN TELEPHONE & TELEGRAPH COMPANY BUILDING, NEW YORK CITY Welles Bosworth, Architect

[88]



Bronze Panel Over Entrance
THE AMERICAN TELEPHONE & TELEGRAPH COMPANY BUILDING, NEW YORK CITY
Welles Bosworth, Architect

is very interesting and the "bigness" of the scheme is apparent, especially if one sees, at the end of one of the long vistas, a figure passing. Then the columns assume their true proportions, by contrast, for, though a few feet shorter than those of the Parthenon, they seem almost overpowering, owing to their number and the scale, which in this interior seems greater than in any other modern example. The whole impression created is one of simple richness and dignity, punctuated with the beauty of detail that ornaments the work.

Many people will offer the old criticism that all this is merely "dress" and not true architecture, for the steel frame so ornamentally concealed by its marble and granite coat does the real work, and all else is scenery. Well, it is scenery, but what else can the modern building have to make it beautiful but this very covering

or overcoating of false construction?

The few attempts to use the elements of modern steel framing in the finished surface of a building, have not proved revelations of beauty, and as the very nature of materials prevents the raising of a modern structure on the post and lintel principle, the architect of today has to accept the fact of the steel skeleton and clothe it in a covering that makes of it a thing of beauty, and this Mr. Bosworth has done.

The building, as we see it now, was built in two units, that forming the Dey Street elevation and the tower on Fulton Street being one, and the mass filling in the Fulton Street and Broadway corner, constituting a later addition. The combination of the two involved some very complicated engineering problems, not the least of which was the fact that when the



The Architectural Record

January, 1924

Detail of Directory Board

THE AMERICAN TELEPHONE & TELEGRAPH COMPANY BUILDING, NEW YORK CITY

Welles Bosworth, Architect



The Architectural Record

January, 1924

THE AMERICAN TELEPHONE & TELEGRAPH COMPANY BUILDING, NEW YORK CITY

Welles Bosworth, Architect

wall of the old building was removed, it was found that the spacing of the vestibule columns necessitated their being at a point which was not under the old wall. This wall for the entire height of the twenty-six stories was cantilevered over to the new line of support, and with such precision was the work done that the final deflection was only one-quarter of an inch.

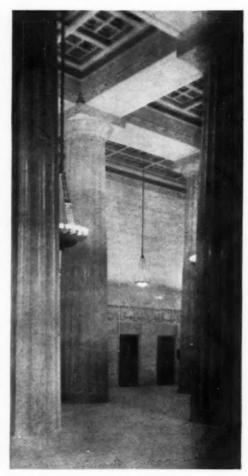
The Fulton Street tower has an interesting treatment to terminate it in the form of a colonnade of the Nike Apteros Ionic order, with a pyramidal stone roof, surmounted by a figure of the "Genius of Electricity" by Evelyn Beatrice Longman, who was chosen as the artist to execute the work after a competition in which many prominent sculptors took part.

The figure is nineteen feet high, of gilded bronze, and stands upon a globe, grasping in one hand a strand of cable and holding aloft in the other a sheaf of thunderbolts.

The foundations of the building go to solid rock, ninety-five feet below grade, and under the first floor are three full basement stories given over to the mechanical requirements of the building, the extensive heating and ventilating plants, boiler room, coal storage, etc.

On the roof of the new portion there is a screened-in basket ball court for the recreation of the employees, while in the first basement there are several restaurants and a cafeteria.

A wonderful view of this building, which involves a real thrill of pictorial feeling, can be had just at dusk, looking down the canyon of Broadway from the North, from a point in front of that terrible architectural mistake, the old Post Office Building. From here we have in the right foreground, Old St. Paul's Chapel, whose once soaring steeple has become, by contrast, a very modest affair;



DETAIL OF LOBBY

behind it rises the mass of the Telephone and Telegraph Building, serene, massive and from the very monotony of its motives giving an impression of the vastness and the power of the modern corporation, whose purpose is Public Service and whose influence reaches throughout the world.

THE WORK OF JOHN T. COMES

BY

CHARLES D. MAGINNIS

THOUGH THE name of John T. Comes has been for twenty years a familiar signature to ecclesiastical designs of marked beauty and distinction, few of the profession, I think, realize the measure of his beneficent influence on American architecture. As more than a year has elapsed since his death even one who knew him as intimately as I may presume to speak of his accomplishment with a critical detachment. It is first of all to be noted of Comes that he had the rare fortune to work under the dominion of a great and absorbing theme. To restore to the Catholic Church a standard of architecture less unworthy of its ancient primacy was a cause to which, in a spirit of pious devotion, Comes may really be said to have dedicated his career. this high interest he gave all of his abounding energy and enthusiasm. In season and out, he wrought and preached for a recognition of the claims of art upon the discriminating attention of the church authorities who, in the face of the grave spiritual problems inevitable to a new and complex society, were not unreasonably disposed to regard art as a concern for a more leisure day. One easily forgets the discouraging conditions against which Comes early contended, so happily have they since been modified.

There is little to say that is agreeable about early Catholic building in America. St. Patrick's Cathedral, New York, by Renwick, was the earliest and, for long, the only work of distinction inspired by the Church. But this was, especially for its time, a remarkable achievement. Contemporaneous building of importance was almost wholly in the hands of Keeley, a man of lesser gifts who, at his death, was

acclaimed as the designer of five hundred churches. An apprenticeship in the office of Pugin had given Keeley so Gothic a bias as to shape substantially all that came from his hand. One readily perceives the evidences of this early training in the exterior of the Boston Cathedral. where the artistic potentialities of the man are best exemplified, but is disconcerted as he attempts to account for certain other cathedrals of his in New England. Numerous parish churches throughout the country, moreover, bear witness to a designing skill which, given the right exercise, might have made for notable Of course, effective control of undertakings geographically far scattered was then very difficult and the mark of this is only too visible. The straitened circumstances which attended even the ambitious projects of Keeley exacted an impoverishment of design which Gothic types tolerated with particularly ill grace. As a consequence, there is wholly missing from these buildings, as indeed, from all the Catholic buildings of this time, that note of vitality which is associated with the operation of right structural laws. Behind professedly Gothic walls one is constantly disappointed to find elaborate forms of stone architecture set forth in scenic terms of lath and plaster. This was a day of fluid movements in population and the physical needs of the Church had to be met with a haste which precluded any very thoughtful solicitude for the artistic expression. Designs for churches and institutions of importance were made with little enterprising study of their architectural possibilities and, at times, with more than a suggestion of their representing the output of some architect's casual



ST. AGNES' CHURCH, CLEVELAND, OHIO

John T. Comes, Architect

stock on hand. What a contribution might have been made to American architecture had the right capacity been brought to bear on these early modest enterprises of the Catholic Church! A deplorably large number of edifices throughout the country were noted merely for a standard of design so illiterate as to puzzle the critic who, recalling the historical primacy of the Church in such matters, marveled at its toleration of inferiority.

Such, in brief, was the state of American Catholic architecture when I first met John Comes. He was then a draftsman in the office of Beezer Brothers of Pitts-

burgh, where I found him responsibly assisting in the design of several brick churches of Lombardy tradition. I was at once aware of a rarely enthusiastic and energetic spirit, of a force which, once completely enlisted, would accomplish mightily in the effort for better things. He had not yet, of course, indicated the possession of the rich artistic endowment he later discovered and his own early buildings are remarkable chiefly for a certain conscious sincerity and a corrective intention expressed in elemental simplicities of form. He was not afraid to be austere in his effects, preferring to

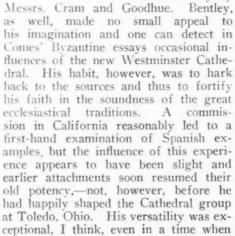
emphasize the directness and economy of his constructive methods. He had a fine intolerance of shams which revolted the craftsman in him but offended even more his sense of religious propriety. It is significant of the integrity of his own character that nowhere in his work do we detect any disloyalty to this principle. In the freer exercise of the professional

authority which came with his later years, such a sturdiness was a matter of course, but the early career was not without those encounters when for cherished principle, the architect must prepared to hazard his professional fortune. His solicitude for the perfect expression of his idea and the eagerness with which he deprecated unworthy compromises with it, represented no mere pride of opinion. He would indulge the client's view readily enough on a mere question of taste,

but on ethical matters he was unyielding. This was the operation of a spiritual power which was with his youth equally with his professional maturity. A man of strong faith and of unusually developed mystical nature, the beauty of the material temple was a positive passion with him. He rejoiced that his art made him an instrument in achieving it. Always conscious of the measure in which his church had suffered at the hands of the ignorant artist, he exulted in the sense of his own growing power to restore it.

It is only in a comprehensive survey of the modern architect's activity that we become thoroughly aware of the anomalies of modern art. And then we are positively startled to perceive the measure of its dependence on historical inspirations. For generations yet we must be satisfied with an architecture of reminiscence, whatever promise of national conviction may here or there from time to time be revealed. The architect who is concerned with the expression of so universal an institution, however, as the Catholic Church, possesses a singular but

obvious immunity from the reproach of archaeology, dealing, as he does, with historical systems, which, for the most part, are as pertinent as ever to the spirit and the practical life of the Church of the present day. None the less, even he must perceive his obligation to express the genius of his time and country. In the effort to find the fitting aspect, Comes, like many others, came definitely under the influence of that modern Gothic movement so remarkably animated in this country by





ST. AGNES' CHURCH, CLEVELAND, OHIO

John T. Comes, Architect

architects are necessarily histrionic. For example, it is difficult to realize that the grave and rather ponderous dignity of the façade of St. Agnes', Pittsburgh, was the work of the same nimble hand which wrought the design for the Butler tower. Through all the types he employed, however, one traces the elusive but unmistakable impress of personality.

Nothing in a review of Comes' work is so striking as his fondness for the unbroken nave. I have in mind not only those examples which are frankly based on the basilican plan, as St. Monica's, Rochester, N. Y.; St. Mary's, McKeesport; St. Agnes', Pittsburgh, and others, but such significant instances as the Gothic church of St. Mary's, Cincinnati, and the Romanesque of St. Agnes', Cleveland. While the resulting economies were, no doubt, a consideration which had their own weight with him, his employment of this type, even when he was unhampered by financial stress (as at Cleveland), signifies that he loved the sense of sheer unity which it imparted to his interiors which, I feel, are reposeful in a notable degree. In the case of St. Mary's and St. Paul's, Butler, Pa., the cruciform plan is almost wholly developed on their exteriors, whereas its interior potentialities are frankly exchanged for the rhythmic continuity of pier. The use of the literal basilica plan is peculiar to Comes' earlier days when his work was more didactic, and was usually associated with a Lombardy exterior. I fancy he would not have given these Lombardy designs a high place in his own estimate of his accomplishment, but they struck an arresting note of simplicity which was in sharp reaction to the architectural fripperies of that time and which, rendered as it always was with craftsmanship, made of the vulgarity of red brick something delectable. It was the sheer simplicity of these interiors, however, which was most telling. Here there was frank challenge to the prevailing tastelessness. How we sense the protest which resides in the simple terms of St. Agnes', Pittsburgh, where fluid line and right proportioning contrive an effect of delightful naïveté! Comes did many things in

his career which displayed more artistry than this modest parish interior but nowhere, I think, are the large characteristics of his art more apparent. Monica's, Rochester, another early work, has a fine stateliness of proportion in the primitive Christian vein, with a timber roofing supported by slightly penetrated clerestories which are an admirable foil for the finely-scaled arcades beneath, Here and elsewhere, as in St. Mary's, McKeesport, is to be noted the influence of the Hildesheim basilicas, and it was doubtless from their neighborhood, where the tradition is active, he derived the feeling for the Bueron decoration as an appropriate system for the enrichment of big surfaces. St. Monica's has vet to receive its decoration after this manner.

It was only, however, when he became really engrossed with the Northern Gothic and Romanesque styles that Comes' work took on the refinement of line and color and the imaginative qualities which we associate with his best achievement. His church at Butler. Pa., I believe, was the first definite promise of a Gothic faculty. Despite the dependence on a rock-face stone, this exterior has an air of suave reticence and refinement which are never absent from his Gothic designs and if its interior must yield in point of quality to such riper works as St. Mary's, Cincinnati, it can lay claim at any rate to one of the most charming church towers of America.

I do not find myself at odds with the popular feeling that St. Agnes', Cleveland, was altogether Comes' finest church. The front of this interesting Romanesque structure does not quite prepare one for the ample proportions of the interior. On seeking the source of this impression, one notes that the lessened implication results from the adaptation of the beautiful Arles entrance which required the narrowing of the nave termination. Entering, one is struck by the singular richness of color in combination with rare simplicity of design. The nave, whose height is approximately twice its width, is without a break in its splendid sweep of line, as sheer as if inspired by Bourges. High up, the walls seem to melt into the



The Architectural Record

January, 1924

barrel vaulting, so slight is the hint of the great stilt. Everything contributes to the suavity of the intention, as observe the way in which the round shaft is related by means of the remarkably ingenious capitals to the square piers above. Note also how the penetration of the clerestory windows gives to the vault such an air of lightness as might easily suggest

instability were it not for the introduction of ribs of such splendid breadth as to give the fullest structural implication. A singularity somewhat out of the tradition is noticeable in the ornaments of the mural decoration which is not, however, essentially inharmonious with the general architectural feeling, and the color effect of the whole interior is exceptionally lovely. A weighty responsibility surely rested on the designer of the stained glass windows of the apse and one

almost trembles at his temerity in assuming to give the requisite character to the particular panel of color which appears now with such admirable emphasis within the arch of the baldachin. In this, and in all that went towards the finished result, Comes threw himself with avid and inexhaustible enthusiasm.

However admirable we may regard St. Agnes', there is no doubt that the Toledo Cathedral design bears the promise of still higher achievement. The façade here has a splendid stateliness and a thoroughly convincing acknowledgment of what lies behind it. It would be hard to imagine a more dramatically impressive motif. It was a favorite one, this of the deeply recessed arch, but here he carried

it to really noble fulfillment. The final study will doubtless bring greater delicacy to the upper arcade, where little more seems wanting, even in this prelumin sketch, to the assurance of an extraordinarily picturesque work. The very capa-ble organization upon which Comes, shortly before he died, gave the significant impress of his name, will, I feel sure, do

no injustice to this or the other proiects which still lie unfinished from his hand, and the work of Comes, Perry, and McMullen will be followed with interest by the profession. Sympathetically developed at their hands, Toledo Cathedral should prove Comes' crowning memorial.

Parochial architecture has notoriously suffered not alone from the inferior standard of design but about as much from the lack of organic planning. Little thought was usually given to the interest of

future group harmony, so that the completed buildings not infrequently appear to have a haphazard and unpleasant relationship, aggravated by differences of style and often of materials. pleaded hard and successfully for a perception of the importance of this intelligent forethought and the beautiful group he planned on Squirrel Hill for the Redemptorist Fathers is a fine instance of his own success.

It remains to speak of perhaps the largest of Comes' undertakings-the Seminary of the archdiocese of St. Louis, a conspicuous instance of an old problem thoughtfully and beautifully solved. Nothing could be more hopelessly stark and expressionless for the most part than



KENRICK SEMINARY, ST. LOUIS, MISSOURI John T. Comes, Architect

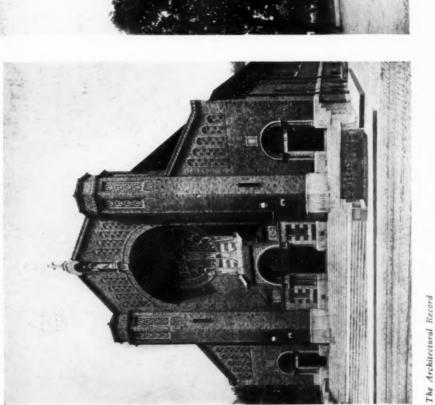


The Architectural Record

, January, 1924

KENRICK SEMINARY, ST. LOUIS, MISSOURI John T. Comes, Architect





John T. Comes, Architect ST. AGNES' CHURCH, PITTSBURGH, PENNSYLVANIA

ST. MARY'S CHURCH, MILLERSVILLE, OHIO

January, 1924



ST. GERTRUDE'S CHURCH, VANDERGRIFT, PENNSYLVANIA
John T. Comes, Architect

the barrack-like institutions which, with a singular tolerance, have been thought acceptable for the purpose of the ecclesiastical seminary. Making reasonable allowance for that quality of austerity which should properly control the design of a building devoted to the training of the priesthood, there is no reason why, in the interest of its plan, such a building may not be, as it is in the case of St. Louis, a thing of positive and compelling architectural interest. Built around a great quadrangle with perfect simplicity of plan, there is contrived a certain spacious but formal picturesqueness which is heightened by the medieval flavor of its design, the relief of shadowy

cloisters, and the fine brooding presence of the massive tower.

Fortunate the man whose high privilege it is to contribute so sensibly to the cause of religion and of nationality. A life of fairly passionate achievement must surely have brought to John Comes at its close the consciousness that many beautiful and eloquent testimonies remained to show that he had wrought well. And if the well-earned dignity of Fellowship in the American Institute of Architects came as a posthumous honoring of his achievements, he was not, happily, deprived of the gratification of knowing that this high professional tribute was contemplated.

THE BUILDING OUTLOOK FOR 1924

By WILLFORD I. KING, Ph.D. of the National Bureau of Economic Research

IN PREVIOUS articles in this series, the fact has been emphasized that forecasting is always a precarious undertaking. If the forecaster is a charlatan rather than a scientist, his task is not so difficult, for, like the ancient oracles, he can clothe his prophecies in phrases subject to so many interpretations that, no matter what happens, success can be claimed. The scientist has recourse only to the much less picturesque method of placing about his predictions such safeguards as "other things being equal," "the probabilities are" and the like. In some instances, his forecasts are sure to be in error, but, in the majority of cases, if carefully made, they approximate the truth, and hence prove of great value to the business man who needs them.

In THE ARCHITECTURAL RECORD of June, 1921, I wrote:-"If the above premises are correct, there is reason to expect that the demand for building construction will remain strong for several years to come and that this demand is likely to hold the prices of both materials and labor at levels relatively high as compared to that of average prices. Though, as forecasted in the earlier chapters, the price of materials is still declining, and though this decline is likely to proceed somewhat further, it seems probable, considering the stage of the business cycle, that the downward movement of building costs will come to a halt before the end of

"On the other hand, unless the customs of the people have changed, the residence shortage will probably prevent any marked decline in rents for several years to come. . . . It will be surprising if loans for building purposes do not become easier to obtain and if interest rates thereon do not decline somewhat further before the trough of the present economic

cycle has passed. . . . The forces now at work seem to show that the latter part of 1921 and the early part of 1922 will be a period offering unusual chances of profit to the builder who is in a position to push his work at that time. The real building boom is more likely to occur later."

The reader can see how accurately these predictions have corresponded with the facts. This prophecy was derived wholly from the evidence of the past and its fulfillment depended upon the absence of any abnormal dominating forces during the period covered. The forecast for 1924 can be made upon similar evidence. If everything remains normal, it is probable that it will be reasonably accurate; but there is always a chance that some unusual series of events may generate forces that will drive industry from its accustomed paths and make all predictions go astray.

In the issue of THE ARCHITECTURAL Record mentioned above, there was also presented a table showing a rough estimate of the actual volume of private building constructed between 1909 and 1920, as compared to the customary requirements of the people of the United States. Since the date of that publication, the present writer, assisted by Mr. Maurice Leven, has made a much more painstaking study of the same problem. The relative building requirements of the old and the new population have been estimated as carefully as possible by a mathematical analysis of the records of actual building in the larger cities of the United States. The records of the total volume of construction in the United States have been worked over, and it is believed that their accuracy has been improved. Furthermore, the recorded period has been extended to cover twenty-

ESTIMATED VOLUME OF CONSTRUCTION IN THE CONTINENTAL UNITED STATES AS COMPARED TO THE ESTIMATED CUSTOMARY REQUIREMENTS FOR NEW AND OLD POPULATION

1902-1922, Inclusive

A	В	c	D	E	F Improve-	G	H	I Customary C	J
	Money Cost		Cost of Buildings	Improve- ments	for		per Person Added to	in Millions at Prices of 1913	
Year	of Buildings in Millions (Current Dollars)	Index of Con- struction Costs	at Prices of 1913 (Millions) B ÷ C	Demanded by Existing Population (Millions) ¹	Additional Population (Millions) D — E	Increase in Population (Thousands)	Population (Prices of 1913) F ÷ G	For Additional Population ²	For All Purposes E + 1
1902	\$1,513	.729	\$2,075	\$671	\$1,404	1,452	\$967	\$1,729	\$2,400
1903	1,632	.807	2,023	688	1,335	1,467	909	1,747	2,435
1904	1,893	.794	2,384	700	1,684	1,474	1,142	1,755	2,455
1905	2,603	.831	3,132	714	2,418	1,752	1,380	2,087	2,801
1906	2,743	.905	3,030	731	2,299	2,077	1,107	2,474	3,205
1907	2,527	.951	2,657	749	1,908	1.846	1,033	2,198	2,947
1908		.914	2,422	761	1,661	1,356	1,225	1,615	2,376
1909	3,026	.934	3,240	778	2,462	2,173	1,133	2,588	3,366
1910	2,905	.964	3,014	794	2,220	1,635	1,358	1,947	2,741
1911	2,829	.970	2,917	806	2,111	1,293	1,632	1,540	2,346
1912	3,009	.981	3,068	819	2,249	1,686	1,334	2,008	2,827
1913	2,805	1.000	2,805	834	1.971	2,069	952	2,464	3,298
1914	2,606	.968	2,693	850	1,843	1,497	1,230	1,783	2,633
1915	2,651	.984	2,694	862	1,832	1.345	1,362	1,602	2,464
1916	3,275	1.168	2,804	874	1,930	1,535	1,257	1,828	2,702
1917	2,754	1.440	1,912	887	1,025	1.262	812	1,503	2,390
1918		1.604	1,464	897	567	672	845	800	1,697
1919	3,893	1.896	2,053	902	1,151	1,186	970	1,413	2,315
1920		2.430	1,553	914	639	1.135	563	1,352	2,266
1921		1.749	1,777	926	851	1,728	492	2.058	2,984
1922	4,798	1.704	2,816	938	1.878	1,617	1,161	1,926	2,864

Average Population multiplied by \$8.59.
 Increase in Population multiplied by \$1.191.

one years instead of twelve. The population growth of the nation has been recalculated. The revised results are believed, therefore, to be distinctly more accurate than those appearing in the former article.

Present figures indicate that, during the twenty-one years covered, the advent of every new inhabitant has, on the average, called for construction valued at \$1,191 of 1913 purchasing power, or for about \$2,250 worth of building at the prices prevailing in the autumn of 1923. The per capita demand of the people already in the United States has, by contrast, been only \$8.59 per annum, in 1913 dollars, the equivalent at recent dates of about \$16.20. It is, then, easy to see that an extremely important factor in the national demand for construction is the growth of population.

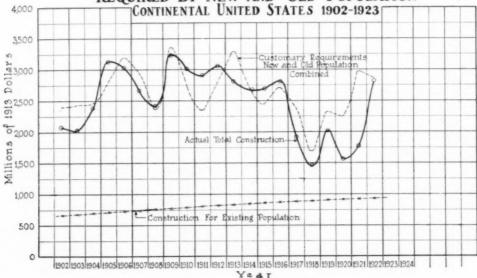
In Chart I, appear three curves, one showing the value of the actual total volume of construction measured in dollars of 1913 purchasing power; the second recording the requirements necessary to meet the average demand of the old inhabitants; and the third showing the customary requirements of both old and new inhabitants combined. The area under the last mentioned curve is so much larger than that beneath the line representing construction for the old inhabitants alone that it is easy to see what a preponderant role increase in population plays in governing the rate of construction activity.

It will be observed that, prior to 1916, the line showing total actual construction fluctuated about approximately the same normal as that representing the customary requirements of the population. Beginning with 1917, however, the actual vol-

ume of construction fell well below the customary line. The same was true in 1918. In 1919, there was a temporary reversal of the positions of the two curves, but, in 1920 and 1921, actual construction again fell far short of normal demands. The shortage accumulated in the period 1917 to 1921, inclusive, amounted to about \$2,900,000,000 in terms of 1913 dollars or approximately \$5,500,000,000 at price

ume of construction per new inhabitant after the estimated construction requirement for old inhabitants has been deducted. The other shows the ratio of the index of construction costs to the index of urban rents. Evidently, when this ratio is high, building is an unprofitable undertaking. When it falls, the builder has a chance of larger gains. When one observes in this curve the great hump

CHART I
ACTUAL TOTAL CONSTRUCTION AS COMPARED
WITH ESTIMATED NORMAL CONSTRUCTION
REQUIRED BY NEW AND OLD POPULATION



levels now prevailing. The chart shows that, in 1922, none of this shortage was made up. The record for 1923 is not yet finished, but the indications are that the building completed in this year, even though very large in amount, will do little more than cover the normal current demands, for there has been a very large increase in population. On the basis of the average demand during the last score of years, there is, then, still a distinct deficit in the building supply.

The origin of this deficit is made plain by Chart II. One curve records the volcovering the years 1917 to 1921, he is surprised that the volume of construction per new inhabitant remained as high as it did during that period.

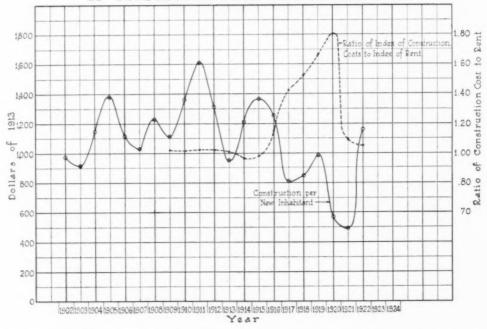
At present, rents have risen and construction costs have fallen until the ratio is only a trifle higher than in the pre-war period. From the supply side—in other words, from the standpoint of the contractor—conditions for building are normal. True, interest rates have been rising steadily since July, 1922, but they are not high yet, and the chances are that they have nearly reached peak and that they will be falling again during the latter part of 1924.

¹ In the former rough estimates, this figure was calculated to be about \$3,000,000,000.

With a sizable building deficit still remaining, with construction costs falling, and with rents still rising, can we look forward in 1924 to a repetition of the 1923 building boom? From the standpoint of all the factors thus far considered, the answer would unquestionably be, "Yes." But there are other forces which must also be considered.

indicates that 1924 will not be a good year for American factories. Fortunately. however, business men seem to have exercised more caution during the 1923 boom than they did during its predecessor of 1919-20. They have not gone into debt so recklessly. They have not accumulated such inordinate stocks of goods. Prices have risen but mildly in comparison to To keep construction on the boom, it the skyrocketing of 1919. The depression

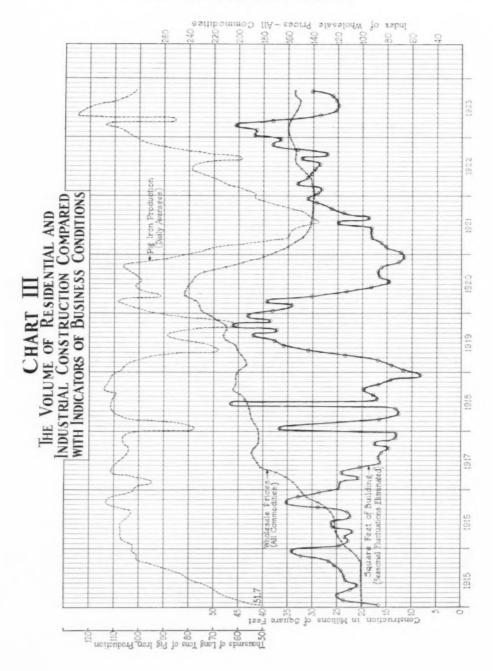
CHART II HOW HIGH COSTS LESSEN THE VOLUME OF CONSTRUCTION PER NEW INHABITANT



is necessary that, in the cities, there be plenty of buyers with ready cash. This condition commonly accompanies a flourishing state of manufacturing. What is the manufacturing outlook for 1924? A glance at Chart III helps us to answer this query. Pig iron production, which is one of the standard indicators of manufacturing activity, is falling rapidly. Wholesale prices reached their peak in April, 1923, and have since been drifting downward with occasional sporadic recoveries. Since the normal business cycle is about 40 months in length, the existing evidence

of 1924 promises, then, to be mild in comparison to the terrific smash of 1920-21. If the construction deficit is to be made up soon, it would appear not unlikely that, even in 1924, building might remain active.

The chances are, however, that part of the deficit will remain-either permanently or for a considerable time. In the great cities, rents and construction costs have both increased somewhat more than the prices of other commodities, and the incomes of tenants have not proved equal to the added strain. People have become



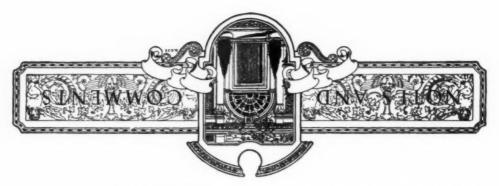
THE ARCHITECTURAL RECORD.

inured to a greater degree of crowding. Three room apartments are being built to house families that formerly demanded four or five rooms. Under these circumstances, we can scarcely expect in a period of depression any strong demand for more room for the old inhabitants. Furthermore, if unemployment appears, immigration will fall off, and this important source of demand for new construction will largely disappear.

The curve representing the volume in square feet of residential and industrial construction (the seasonal factor has been eliminated) shows a very sharp decline during the spring of 1923 with a distinct rally in the autumn. It seems scarcely probable that this upward move-

ment of the curve will long continue However, it is equally unlikely that the decline will reach any such depth as that of late 1918 or of December, 1920. In view of the present heavy immigration, the chances are, in fact, that the early part of 1924 will be characterized by an unusual amount of building activity for a period approaching the trough of the business cycle. Later in the year, however, the general tendency to depression is likely to make the demand for residential construction dull.

On the whole, from the standpoint of the professional builder, the present seems rather to be a time for exercising caution and conservatism than for yielding to despondency.



THE COST OF REGISTRATION

Every now and then the architect lets himself in for a new item of cost, which is borne precisely by—himself. Mr. Cass Gilbert pointed this out not long ago about advocacy of the quantity system. He said, in effect, that it is all very well to propose that the owner shall pay for a quantity survey, but the owner will be sure to insist, in the long run, that this is part of the architect's service and the architect must pay for it out of his normal fee.

So it has proved with registration. Ostensibly it is for the security and the benefit of the public, and if so the expense should be borne by the public treasury. Actually the state is loath to burden itself with additional expense, and when architects advocate such a law—whether for public or for professional benefit and protection—the tendency of legislators is to insist that its administration must be "self-supporting through fees. In other words, the architects themselves must pay.

The law first passed generally provides only for an initial registration fee whereby an architect is registered once and for all. In the first years of its administration, while the great number of older men are being certified, this may suffice for the expenses of the Registration Board. As time passes, however, and there is only the relatively small annual crop of young aspirants and transfers to be examined, the need of additional funds must be met, if the whole system, established with so much labor, is not to fall to the ground in that State before any of its substantial benefits have been secured. In the temper of legislatures, this can only be secured by adding an annual renewal fee. Individually this fee is small, but, if an architect occasionally practices in several states, he must pay it constantly in them all, or be put to great additional trouble and expense in getting registered

anew there after forieit. Thus a substantial item has been added to his overhead, which must go on through lean years as well as prosperous ones. It is an item which cannot ordinarily be passed on to the client, and thus involves a direct reduction of the architect's emolument.

Registration has indeed come to stay, and in the end may bring substantial benefit to the competent practitioner by excluding the incompetent from the field. But the public, which thus tends to secure direct protection against incompetence, ought certainly to share in the burden of expense. If the Boards cannot be maintained on the proceeds of a reasonable initial fee, then let the States provide the difference as part of its annual appropriations.

NEW BUILDINGS FOR THE UNIVERSITY OF BRUSSELS

The beneficence of the famous Commission for Relief in Belgium is to be commemorated in an admirable manner. It is not too much to say that the Belgian Government spoke with true understanding of popular sentiment in many countries when it suggested that available funds be devoted, in some public form, to objects sincerely expressive of the original spirit of the Commission, thus serving as a permanent memorial of the relief work.

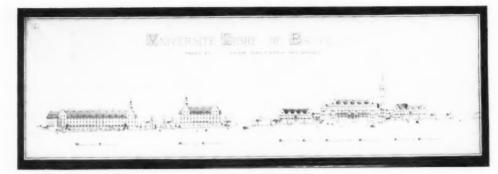
The suggestion just referred to was offered by the Belgian Government after the conferences during the summer of 1919 between Mr. Herbert Hoover, as chairman of the Commission, Mr. Delacroix, the Belgian Prime Minister, and Mr. Emile Francqui, chairman of the Belgian National Committee. The available funds were those balances, from several sources, which still remained in the hands of the Commission, and which, it was agreed, should be expended for the welfare of the people of Belgium. A



The Architectural Record

January, 1924

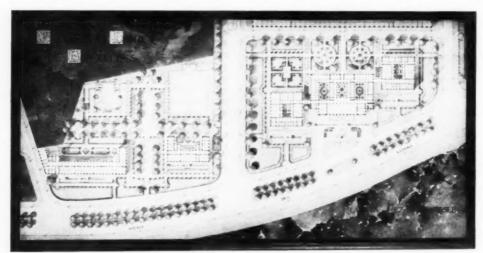
Perspective of Central Group
NEW BUILDINGS FOR UNIVERSITY OF BRUSSELS, BELGIUM
Alexis Dumont, Architect
John Mead Howells, Consulting Architect



Perspective of New Group UNIVERSITY OF BRUSSELS, BELGIUM Alexis Dumont, Architect John Mead Howells, Consulting Architect

few words may show clearly how it has come to pass that the Commission for Relief in Belgium Educational Foundation, successor to the Commission for Relief in Belgium, now appears as the donor of a new group of buildings for l'Université libre de Bruxelles.

consisted of a residue of profits earned from the sale of food to those able to purchase it in Belgium during the occupation, and sales of foodstuffs to persons and countries outside of Belgium. The unexpended profits of this character finally remaining in the hands



Layout of New Group UNIVERSITY OF BRUSSELS, BELGIUM Alexis Dumont, Architect John Mead Howells, Consulting Architect

In five years of relief work the operation of the Commission and its agent in Belgium, the Comité National, is said to have involved the handling of more than \$1,400,000,000 in the purchase and import of domestic crops. When the good work was finished the balance in the hands of the Commission, besides unexpended portions of sums advanced by

of the Commission amounted to 240,000,000 francs, approximately, and the disposition of the monetary balances was referred to the Belgian Government, which requested Mr. Hoover to outline a plan. The plan offered and accepted dealt with the extension of education in Belgium, direct aid to universities, and kindred subjects; and under its various governments, which were repaid provisions two commissions were formed to

replace the Commission for Relief in Belgium, namely, the C. R. B. Educational Foundation in America and the Fondation Universitaire in Belgium. The Educational Foundation, under the leadership of the originator of the plan, and following out its purposes, which are "assisting Belgian education and promoting the exchange of ideas between Belgium and America," among other undertakings entered into an agreement with the University of Brussels for the erection of buildings, which were required to round out the plans for the creation of a new university center. Mr. John Mead Howells was appointed Consulting Architect and Adviser to the Foundation.

After careful study, it was decided that this group of university buildings should be erected in a new quarter of the city near the Bois de la Cambre. The land was largely controlled by the city authorities, who have coöperated fully in the plans of the university and of the Foundation. As this brought in the question of architectural advice, Mr. Howells, accompanied by Mr. Raymond M. Hood, was sent to Belgium in January, 1923—a mission requiring not a little

diplomacy.

The resident members of the C. R. B. lending their aid, Mr. Howells obtained the desired land from the city. The Programme for the Competition (twenty pages by Mr. Howells and Mr. Hood, as assistant) was finished and translated in Belgium, and the following Belgian architects were invited to compete, after a study of their work and apparent ability; M.M. Alexis Dumont, Eugene Dhuicque, Ernest Jaspar, Adolphe Puissant, and Joseph Van Neck. Of these five, one, Mr. Dhuicque, has unfortunately been ill and unable to send in his drawings. These competitors, having been specially invited, are paid under the Programme 25,000 Belgian francs each, and the winning architect will have the construction of the buildings.

The advice was given that, from the architectural point of view, the chief buildings should be designed under the inspiration of one of the historic Belgian styles. That, of course, did not mean that the style should have the character of a servile copy or of an archaeological reconstitution. But it should be the artist's task, while reckoning primarily with the requisites of a modern school in such matters as lighting, ventilation, and mechanical equipment, not to lose sight of the spirit and the charm of style. It is essential (Mr. Howells admonished) that this group should be, in conception and architectural expression, worthy of the purpose for which

it is created and of the site it is to occupy. The outlay provided for buildings of this group does not indeed permit the adoption of a lavish style; but Belgian architecture presents numerous examples of edifices unit-

ing beauty with great simplicity.

The Programme contains not only the terms of the competition, but also the number and superficial area of all important rooms or communications. It provides that buildings-and this means the chief buildings -are to be designed for the administration of the university; that the library, the law school, and the school of arts are to be placed together on the land in front of the present School of Sciences. On the land to the left of this will be placed the Maison des Etudiantes and the Maison des Etudiants, the former separated by court or gardens from the larger house for male students. These houses, Mr. Howells says, "cannot be described as what we in American colleges call 'dormitories'." They are rather homes, or club-houses, carefully supervised, excellent home-clubs for the young people who come from a distance. In this way, however, the American dormitory system, or the idea of it, will be for the first time introduced into a Continental university; and "from this dormitory system, it is hoped, will grow up something of that love of the Alma Mater found among American graduates. This will build up an alumnus valuable to the university, which is also characteristically American." The land behind the university group is owned by the university, while that back of the home-club group is owned by the Foundation and will be occupied by faculty residences, athletic fields, and supplementary buildings for the university.

The plans of the participants in the competition were examined by experts, and during the week from November 5 to November 11 were submitted to a jury composed of the following: Herbert Hoover, President of the C. R. B. Educational Foundation and Honorary President of the Fondation Universitaire; Dr. Paul Heger, President of the University of Brussels; Arthur Brown, Jr., D. G. F., San Francisco, Corresponding Member of the Institute of France; John Mead Howells, D. G. F., New York, Consulting Architect to the C. R. B. The decision was in favor of Mr. Alexis Dumont's drawings (Series D when the jury was reaching its decision, and when, of course, their names were withheld), and I may add that this was really a verdict, i. e., unanimous. The ballots were opened by the Belgian Ambassador. The A series was the work of Mr.



Perspective of Central Group UNIVERSITY OF BRUSSELS, BELGIUM Mr. Jaspar, Architect John Mead Howells, Consulting Architect

Van Neck; the B series was contributed by Mr. Puissant; the C series, admirable—even charming—in several respects, by Mr. Jaspar.

The most fortunate competitor is a member of a distinguished Belgian family, and his father's name is also well known among those of the Belgian architects of a somewhat earlier day. Aesthetically, the prizewinning design seems, in a very agreeable way, familiar to one who may remember the buildings, or rather, perhaps, the spirit and vigorous style of the buildings, in the Grande Place at Brussels.

MARRION WILCOX.

FELLOWSHIPS OF THE AMERICAN ACADEMY IN ROME

The American Academy in Rome has announced its annual competitions for Fellowships in architecture, painting, sculpture, musical composition and classical studies. The stipend for each Fellowship in the fine arts is \$1,000 a year for three years. In classical studies there is a Fellowship for one year with a stipend of \$1,000, and a Fellowship paying \$1,000 a year for two years. All Fellows have opportunity for travel, and Fellows in musical composition, from whom an extra amount of travel is required in visiting the leading musical centers of Europe, receive an additional allowance, not to exceed \$1,000 a year, for traveling expenses. In the case of all Fellowships, residence and studio (or study) are provided free of charge at the Academy.

The awards of the Fellowships will be made after competitions, which, in the case of the fine arts, are open to unmarried men who are citizens of the United States; in classical studies, to unmarried citizens, men or women. It should be particularly noted, however, that in painting and sculpture there is to be no formal competition involving the execution of work on prescribed subjects, as formerly, but these Fellowships will be awarded by direct selection after a thorough investigation of the artistic ability and personal qualifications of the candidates. Candidates are requested to submit examples of their work and such other evidence as will assist the jury in making the selection.

Entries will be received until March first. Circulars of information and application blanks may be obtained from Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York City.

Our attention has been called to the fact that the Frank Brophy Ranch House, published in our November, 1923, issue, was the work of the firm of Lescher, Kibbey & Mahoney. The firm of Lescher & Mahoney, to whom the credit was given, are successors to Messrs. Lescher, Kibbey & Mahoney.

Through an error the Parish House of St. Chrysostom's Church, Chicago, Illinois, published in our December, 1923, issue, was credited to Messrs. Clark and Walcott. We desire to advise that Messrs. Edward H. Bennett and William E. Parsons, of Chicago, were consulting architects on this work.